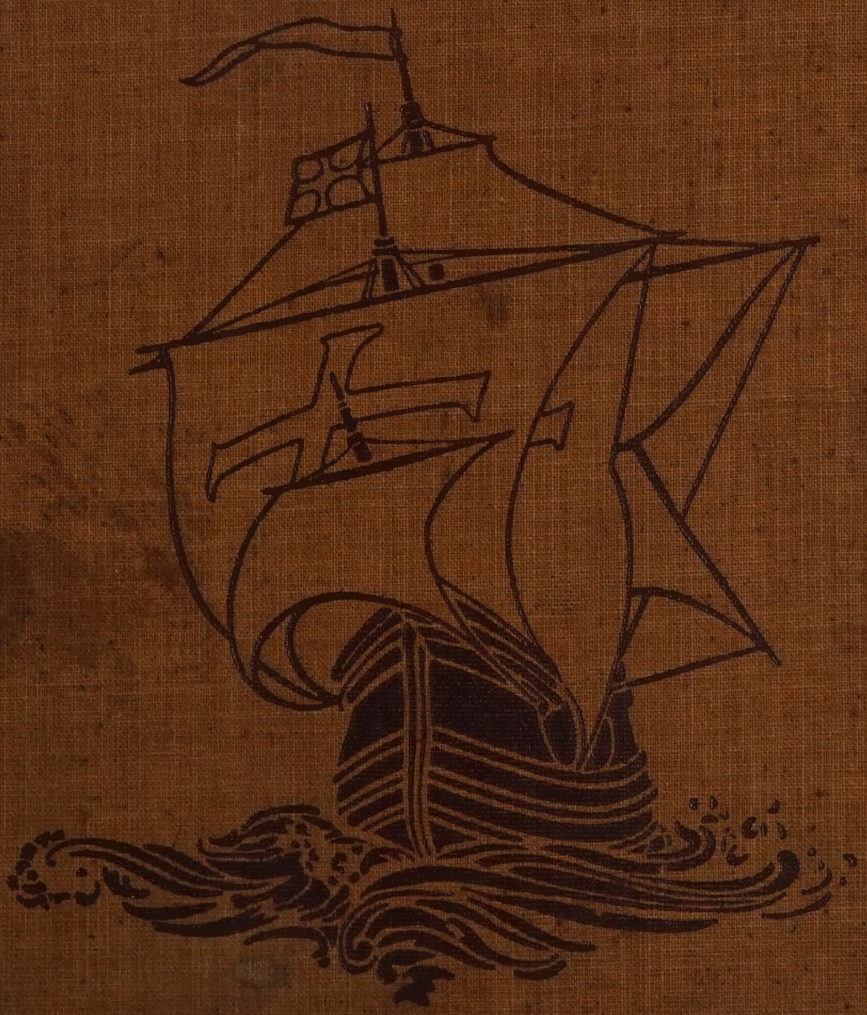
NATURAL INTRODUCTORY GEOGRAPHY

REDWAY AND HINMAN



AMERICAN BOOK COMPANY

Helpful Geographical Readers

Carpenter's Geographical Readers—	
North America	$0.60
South America	.60
Europe	.70
Asia	.60
Australia, Our Colonies, and Other Islands of the Sea	.60
Africa	.60
Dutton's World at Work Series—	
Hunting and Fishing	.30
In Field and Pasture	.35
Krout's Alice's Visit to the Hawaiian Islands	.45
Two Girls in China	.45
Long's Home Geography	.25
MacClintock's The Philippines	.40
Payne's Geographical Nature Studies	.25
Schwartz's Five Little Strangers	.40
Shaw's Big People and Little People of Other Lands	.30
Van Bergen's Story of China	.60
Story of Japan	.65
Story of Russia	.65

AMERICAN BOOK COMPANY

NEW YORK CINCINNATI CHICAGO

M. Thornley
1-3-08

THE NATURAL GEOGRAPHIES

NATURAL INTRODUCTORY GEOGRAPHY

BY

JACQUES W. REDWAY

AND

RUSSELL HINMAN

Author of the "Eclectic Physical Geography"

NEW YORK ·:· CINCINNATI ·:· CHICAGO

AMERICAN BOOK COMPANY

CONTENTS

PAGE

INTRODUCTION:
- GEOGRAPHY 5
- CARDINAL DIRECTIONS 6
- THE LAND ENDS TO THE EAST 7
- THE LAND ENDS IN OTHER DIRECTIONS . . . 8
- THE CONTINENT OF AMERICA 9
- ACROSS THE SEA TO THE EAST 10
- THE EASTERN CONTINENT 11
- OUR INTEREST IN THE EASTERN CONTINENT . . 12
- HOMES OF THE RACES OF MANKIND . . . 13
- OUR JOURNEY EASTWARD COMPLETED . . . 14
- OUR JOURNEY TEACHES THE SHAPE OF THE EARTH 15
- THE TURNING OF THE EARTH 16
- THE ZONES 17
- THE SCALE OF MAPS 19

NORTH AMERICA — POSITION AND SHAPE . . 21
- ISLANDS 22
- MOUNTAINS 22
- PLAINS 24
- RIVER SYSTEMS AND SPRINGS 25
- BASINS, FLOOD PLAINS, AND DELTAS . . . 26
- DIVIDES AND LAKES 27
- PEOPLE AND SUBDIVISIONS 28

UNITED STATES — POSITION AND COAST LINE . 30
- RELIEF AND DRAINAGE 31
- HEAT 33
- RAINFALL 34
- HISTORY AND GOVERNMENT 35
- FARMING, LUMBERING, AND HERDING . . . 38
- MINING 39
- MANUFACTURING AND COMMERCE 41

PAGE

- NORTHEASTERN SECTION — PHYSICAL FEATURES AND RESOURCES 43
- MANUFACTURES, COMMERCE, CITIES 44
- NORTHERN SECTION — PHYSICAL FEATURES . . 46
- CROPS 47
- ANIMAL PRODUCTS 49
- LUMBER AND MINERALS 49
- MANUFACTURING AND COMMERCE 51
- GREAT CITIES 53
- SOUTHERN SECTION — SURFACE AND PEOPLE . . 56
- FARM AND FOREST PRODUCTS 57
- MINING, MANUFACTURING, CITIES 59
- PLATEAU SECTION 61
- PACIFIC SECTION 64

MINOR COUNTRIES OF NORTH AMERICA . . 67
- CORRELATIONS AND COMPARISONS 73

SOUTH AMERICA 74
- CORRELATIONS AND COMPARISONS 85

EURASIA 87
- EUROPE 89
- CORRELATIONS AND COMPARISONS 111
- ASIA 113
- CORRELATIONS AND COMPARISONS 125

AFRICA 126
- CORRELATIONS AND COMPARISONS 136

AUSTRALIA AND ISLANDS 137
- LATITUDE AND LONGITUDE 141
- CORRELATIONS AND COMPARISONS 142
- TABLES 143
- INDEX AND PRONOUNCING VOCABULARY . . . 145

COPYRIGHT, 1897, 1907, BY
AMERICAN BOOK COMPANY.

E. P. 4

PREFACE

THE Natural Introductory Geography is designed for a first text-book in the subject, and is intended to furnish a two-years' course for pupils between nine and eleven years of age.

It recognizes the general fact that geography in the elementary schools should be a practical study of man's physical surroundings *in their relations to him.* Hence the central idea of the treatment is *man* — his history, customs, industries, and commercial relations as modified or controlled by his physical environment.

It recognizes in particular that one of the important aims in the teaching of elementary geography should be to fix indelibly in the brain of each pupil skeleton maps on which he may see with his mind's eye, at any time, the chief physical features, countries, and cities of the world in their proper locations with relation to one another. These are the units of the world's geographical intercourse. A knowledge of their names, locations, and chief characteristics constitutes the proper foundation for the study of geography in more advanced grades; while it fits the large proportion of pupils who leave school at an early age to understand the countless geographical references which they will encounter in daily life.

It points out the great linguistic and racial lines that divide the inhabitants of the earth into separate groups, in each of which there is an essential similarity in manners, customs, and general views of life. The states of our Union are divided into groups upon an industrial basis which is simple, practical, and fundamental.

It develops the subject upon a definite and natural plan, and in accordance with approved pedagogical principles. Each lesson, while complete in itself, paves the way to the following lesson. The pupil is led from that which is perfectly familiar and within easy range of his observation, to form concepts of things that are remote and strange; and not until such concepts have been formed are these things named or defined. Generalizations are demanded only after the materials for their formation have been studied. The pupil's own country is presented early in the treatment, and then all other countries are studied in their relations to it.

It treats the subject simply and sensibly, keeping well within the range of the pupil's comprehension, but never descending to baby talk or other adventitious devices to hold his attention.

It demands work from the pupil, rather than from the teacher, while it stimulates the independent thought and excites the interest of both. At the end of the treatment of each grand division, carefully prepared exercises lead to the correlation and comparison of the parts of the subject already studied, and form a cumulative review and synthesis of the pupil's work. In these cumulative reviews special attention is directed to the location of the particular physical features, countries, and cities which should appear on the skeleton maps that the proper teaching of elementary geography aims to impress on the pupil's mind.

It provides material for concentration, or correlation, of studies. The text is expressed

in accordance with the fundamental laws of English composition, and may be used in language work. The topics at the end of each lesson outline a few paragraphs in which the pupil can reproduce in his own words the main thought of the lesson.

It recognizes the value of map drawing and sand modeling in elementary geography, and introduces them in such manner that they shall be properly used as means to an end, and not as ends in themselves.

The relief maps contain the names of the features represented, and require no "key maps" or other accessories to adapt them for practical use.

The maps of coördinate divisions of the land are drawn on the same scale, so that relative areas are accurately depicted and may be directly compared. Thus, a single scale serves for all the maps of the grand divisions; a single, but larger, scale for corresponding maps of the United States and Europe; and a single, but still larger, scale for the sectional maps of the United States, with the exception of the map of the Northeastern Section, which is drawn on three times the scale of the other sectional maps.

The pictures, most of which have been reproduced from photographs, are of simple subjects within the comprehension of young pupils, and they have been arranged upon the pages in such manner and in such numbers that they serve a really useful purpose in illustrating the text.

The authors take pleasure in acknowledging their indebtedness to Dr. C. T. McFarlane, Principal of the State Normal and Training School at Brockport, New York, for valuable suggestions and assistance in revising the manuscript.

INTRODUCTORY GEOGRAPHY

GEOGRAPHY

To-day you begin to study this text-book of geography. Before this you have probably taken many walks and rides in the region about your home. If you live in the country you have seen, during these walks, hills and valleys, streams and ponds, woods and fields, and you may have visited a near-by village. If you live in a town you have seen the post office, the railroad station, many mills and stores, and quite likely the house where a steam fire engine is kept.

You have seen these places near your home so often that you have learned just where they are, and what they are. Probably you have learned also of what use they are. In learning these things you have been learning geography, for geography teaches about the world in which we live. It teaches what there is in the world, where the different places are, and how or why the various places and things are useful to man.

As you ramble about in the region near home, you can thus learn geography by actually seeing the places and things themselves; but the whole world is so large that few of us can ever visit very much of it. We study some such book as this to learn about the many parts of the world which we have not visited.

The study of geography from a text-book is much easier and more interesting after we have traveled over our own neighborhood and actually seen the places and things which it contains, what they look like, and how they are used.

Geography teaches about the world in which we live; what places and things there are in

it, where they are, and how they are useful to man.

We can study geography by noticing places and things in our walks about home; and this will make it easier to study geography from a text-book about the more distant parts of the world.

CARDINAL DIRECTIONS

In the study of geography a person often has to describe the direction from one place to another. To make it easier to do this, names have been given to certain directions. The names of the chief, or *cardinal*, directions are *east*, *west*, *north*, and *south*.

You know that the sun seems to rise in nearly the same part of the sky every morning, and that it sets in the opposite part of the sky every evening. *East* is nearly the direction toward sunrise. *West* is nearly the direction toward sunset. If you stand with your arms extended sidewise, your right hand pointing east and your left hand pointing west, the direction straight in front of you is *north* and the direction straight behind you is *south*.

Suppose that you are standing at the dot inside of the ring, and that the arrow marked X points east. In what direction does the arrow Z point? In what direction does the arrow T point? In what direction does the arrow Y point? Which arrow points nearly toward sunrise?

Another easy way to find these directions is to notice your shadow when you are standing upright in the sunshine just at noon. In our part of the world your shadow then points north from your feet. If you face the north, what direction is behind you? what direction to your right? what direction to your left?

THIS GROUP OF STARS IS CALLED "THE DIPPER."

On a clear night you can find these directions by means of the stars. In our part of the world you can see a group of seven stars as in the picture. This group is called "the Dipper." If you follow onward with your eye the line of the front side of the Dipper, you will see another bright star. This is called the North Star. The direction on the ground toward this star is north.

Sailors usually find these directions at sea by means of a wonderful little instrument called the *compass*. This is a box containing a little bar of magnetized steel balanced on a sharp point, on which it can turn freely. No matter which way we may turn the box, this bar, or *needle*, swings back and comes to rest with one end pointing nearly north and the other end pointing nearly south.

MARINER'S COMPASS.

The names of the cardinal directions are east, west, north, and south.

East is nearly the direction toward sunrise. North is the direction, on the ground toward the North Star.

If you stand with your right side toward the east, you will face toward the north, your

We can see a Long Way over the Fields to the Horizon.

left side will be toward the west, and your back toward the south.

THE LAND ENDS TO THE EAST

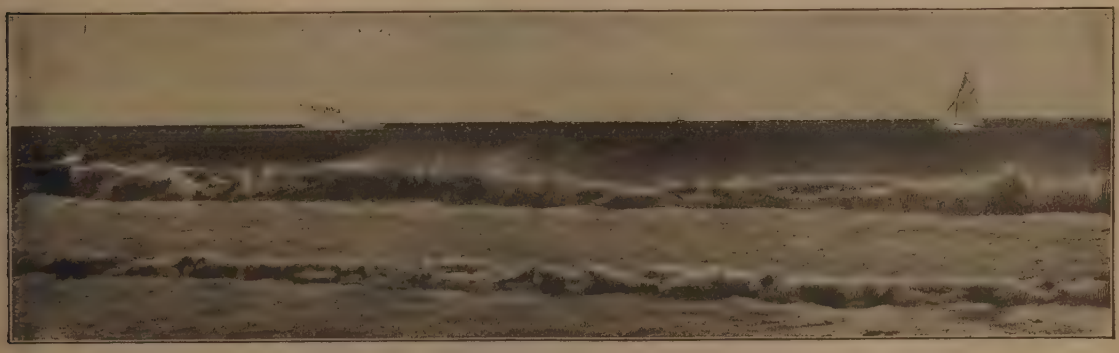
In your walks about home you always find ground to walk on. The ground is sometimes called *land*. If you were to start from your home and travel on and on in any direction, do you think you would ever reach the end of the land? Let us see. In which direction shall we go? Point in the direction of sunrise. Stand up and face the east. We will travel toward the east.

Perhaps we can go part of the way by railroad. We pass through town after town and through the open country, where we can see a long way over the fields to the *horizon*, or the place where the sky seems to meet the land in the distance.

At last we catch glimpses of dark blue water far ahead. It seems to grow broader and wider as we go forward, and finally we reach its edge. It is a vast expanse of water, greater perhaps than any we have ever seen. The edge of the land, or *shore*, stretches off to the right and to the left as far as we can see; while the water extends away to the east until it seems to meet the sky, at the distant horizon.

The surface of the water is usually heaving up and down in waves, which, one after another, move swiftly toward the land, and dash against it with a roar in long lines of snow-white foam.

We have actually reached the end of the land toward the east! The water before us is the *sea* or *ocean*. It is different from most streams and ponds which we have seen, not only because we can not see land on the other



The Water extends away until it seems to meet the Sky at the Horizon.

MOUNTAINS ARE HIGH AND STEEP.

side of it, but also because its water is so salt that it can not be used for drinking.

The land we live on comes to an end somewhere to the east of our home, where it meets the sea or ocean.

The sea is a great body of salt water, so wide that we can not see land on the other side of it.

THE LAND ENDS IN OTHER DIRECTIONS

Let us now travel from home toward the west, to see if the land ends in that direction also. At first we may travel over land that seems smooth and level, but after a while the land before us becomes rough and hilly. The hills are so very high and steep that they are called *mountains*.

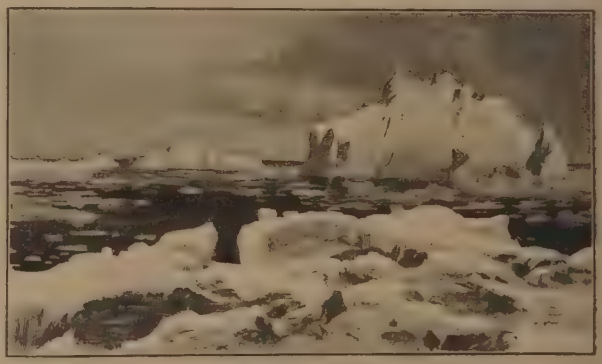
By and by we come to a vast sheet of blue water which stretches out in front of us until it seems to meet the sky in the far-distant west. The great waves come rolling in and dash into white foam upon the shore, which stretches out to the right and to the left as far as we can see. If we taste the water we find that it is salt. We have reached the end of the land toward the west! The sea or ocean is again in front of us, but now the sea is west of the land, while before the sea was east of the land.

The land we live on is very wide, from east to west. It takes a railway train nearly five days and nights to cross the land from the ocean on the east to the ocean on the west.

If we journey from home toward the north, the railway soon ends. We then must camp out at night, as we find no towns or farms, and but very few people.

At last, after many weeks of travel, we reach the end of the land, and the salt water of the sea is before us. Here, however, we may find the sea full of floating ice, for in the far north the winters are very long and cold, and the ice and snow are not all melted during the short summer.

We have found that the land ends toward the east, toward the west, and toward the north. Let us see if the land ends also in a southerly direction.



THE NORTHERN SEA IS FULL OF FLOATING ICE.

When we start from home we may travel at first by rail, but after a while we must go on foot or on horseback. Soon we reach a country where there is no winter at all. For weeks we travel through dark, gloomy forests, where the trees and tangled vines are so thick that we can not pass through until we have cut a path. Here we may see troops of long-tailed monkeys playing in the trees, and flocks of beautiful green, red, and yellow parrots flying about.

At length we leave the forests behind and

gradually reach a colder region in the far south, where the winters are long and the summers short, as in the far north. At last we are stopped by a vast expanse of salt water. The sea is again before us! We have reached the end of the land toward the south!

TOPICS FOR ORAL OR WRITTEN WORK

(*Answer in Sentences*)

I. DIRECTIONS. How can you find north? south? east? west?

II. END OF THE LAND. In what directions from your home does the land end? What is the sea? What is the shore?

THE CONTINENT OF AMERICA

If we travel from home in *any* direction, we shall at last come to the sea, for the sea lies on all sides of the land. If we should follow the shore of the sea entirely around the land until we reached our starting place again, we should find that the shape of the land is something like the shaded part of the outline map at the top of this page.

When your photograph is taken, the picture looks like you but is smaller than you are. In the same way this outline map shows the shape of the land, but is much smaller than the land itself. The real land is so very large that it would take several years to walk all around its edge.

On the outline map the land is shaded, but the sea is white, so you can easily tell the one from the other. The directions are marked near the edges of the map. The east, or sunrise, side of the land is toward the east side of the map; the west, or sunset, side of the land is toward the west side of the map; and so on. You see that most of the land is in one great mass, but that along its margin there are several smaller masses of land, each completely surrounded by water. The large mass of land is called a *continent*. It is the continent of America. The smaller masses of land surrounded by water are called *islands*. The continent and islands together are sometimes called simply America.

You will notice that the sea or ocean which surrounds the continent is one continuous body of water; but on different sides of the continent it is called by different names. What is the name of the part of the sea east of America? What is the name of the part west of America? of the part north of America?

Is the continent as wide in the middle as it is farther north or farther south? In the middle it looks like a mere strip or neck of land. At the narrowest part of this neck a man might walk across the continent in a single day from the Atlantic to the Pacific Ocean. A narrow neck of land connecting two larger masses of land is called an *isthmus*, a word which means "neck." Point to the isthmus on the map. What is its name? Point to the part of the continent north of the isthmus; to the part south of the isthmus. Each of these parts is a *grand division* of the continent. One of these is called North America, the other South America. We live in North America.

TOPICS FOR ORAL OR WRITTEN WORK

(*Answer in Sentences*)

I. THE MAP. In what respect is the outline map like the land? Name one way in which it is

different. Which side of the map is supposed to be toward sunrise? toward sunset? toward the north? toward the south?

II. The Continent. Name it. Name its grand divisions. By what oceans is it surrounded? How is it different from an island? What is an isthmus?

ACROSS THE SEA TO THE EAST

What is the name of the continent on which you live? In which of its grand divisions do you live? Which ocean is east of North America?

To-day we will go to the east shore of North America and get on a great steamship in which we will sail out on the Atlantic Ocean.

The Steamship is built of Steel.

The steamship is built of steel, and there is room in it for more than a thousand people. Powerful engines drive it through the water as fast as a freight train moves on the land. We will sail toward the east.

As we move away, the land grows blue and misty in the distance, and finally sinks out of sight behind us. There is now nothing to be seen but the ship, the water all around us, and the sky overhead. We steam along, day and night; the sun seems to rise out of the water in front of us each morning, and to go down into the water behind us every evening.

Even when the weather is bright and pleasant, the waves of the sea are generally

Cabin on an Ocean Steamer.

large enough to make the ship rise and fall and rock from side to side, so that it is hard to keep our balance while walking about the ship. But when the storm winds blow, the waves rise high and toss the great ship about as if it were a cork. We must then stay in the cabin and not go out on deck, for the high waves sometimes dash over the ship, and we might be swept away and drowned.

All this time the engines have been driving our ship eastward. At last, about a week after starting, we can see land far ahead. As we draw nearer to the land, it seems to rise out of the sea, and its shore extends far to the right hand and to the left. Finally our ship stops, and we go ashore. We have crossed the Atlantic Ocean and have reached another continent! This land, which we reach by sailing to the east, is called the Eastern Continent.

TOPICS FOR ORAL OR WRITTEN WORK

(*Tell about Each Topic in Sentences*)

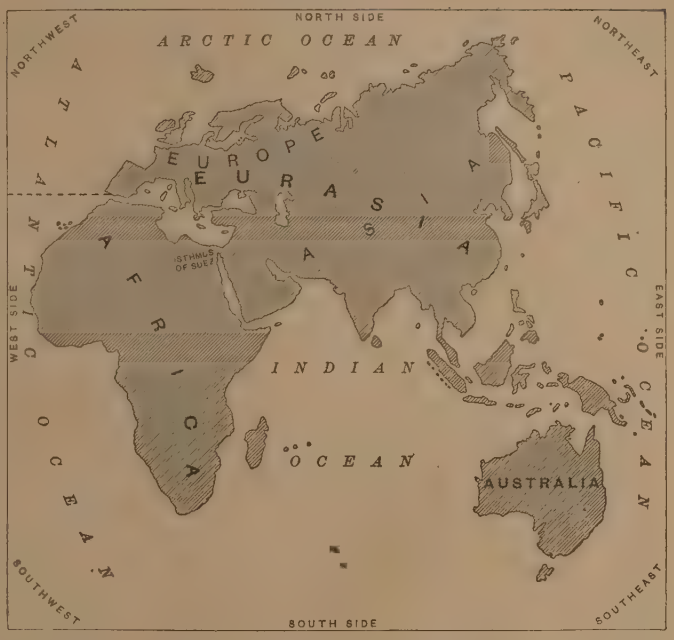
I. The Steamship. Its material. Its size. Its use. Its swiftness.

II. The Journey. Starting place. Direction of journey. Time of journey. Stopping place.

III. Mid-ocean. By what the ship is surrounded. Where the sun seems to rise and to set.

THE EASTERN CONTINENT

How many continents have we now learned about? What ocean is between them? How long does it take to cross from one continent to the other? On which continent do you live? What is the other continent called?



The outline map on this page shows the shape of the Eastern Continent. It also shows the islands near by.

Are most of the islands near this continent directly east of it? Are they directly south? The direction halfway between south and east is called *southeast;* that between south and west is *southwest.* What is the direction between north and west called? What is the direction between north and east? In what direction from the Eastern Continent are most of the islands?

Near the southeast corner of the map you may see a very large island. What is its name? Australia is such a large island that it is generally called a continent. The word *Australia* means "southern country."

Compare the map of America with the map of the Eastern Continent. Which of these continents is the larger? The Eastern Continent is nearly twice as large as the American Continent. Name the three continents in the order of their size.

Name the ocean that is north of the Eastern Continent. Which ocean is east of it? What ocean is south of this continent? Which ocean is west?

In what direction did we cross the Atlantic to reach the Eastern Continent? The dotted line on the map shows where we approached the continent and landed. In what direction is America from the Eastern Continent? America is often called the Western Continent.

Like America, the Eastern Continent is nearly separated into two parts by the ocean. Only a narrow neck of land joins the two parts. What is such a neck of land called? What is the name of the isthmus which joins the two grand divisions of the Eastern Continent?

What is the name of the grand division southwest of the Isthmus of Suez? The other grand division may be called Eurasia; but the western part of it is often spoken of as the grand division of Europe, while the eastern and larger part of it is spoken of as the grand division of Asia. The grand division of Europe is but little larger than the continent of Australia.

TOPICS FOR ORAL OR WRITTEN WORK

(*Answer in Sentences*)

I. CONTINENTS. How many continents have you studied? Name them.

II. GRAND DIVISIONS. Name the grand divisions of the two large continents.

III. OCEANS. What is an ocean? Name the oceans that you have studied.

OUR INTEREST IN THE EASTERN CONTINENT

Although the Eastern Continent is separated from our land by the wide ocean, there are at least two good reasons why we should learn about it.

First, many things in common use come to us from that far-away land. Much of our tea and rice, and nearly all of our pepper and other spices, come from Asia. The linen of which handkerchiefs and tablecloths are made, and much of the woolen and silk of which

THE LANDING OF COLUMBUS IN AMERICA.

our clothes are made, come from Europe. Most of the tin which forms the outside coating of our tinware comes from southeastern Asia, Australia, and the islands between. These and hundreds of other useful things are brought to us across the ocean.

But the Eastern Continent is even more interesting for another reason. It is our old home! Perhaps we ourselves never lived there, but our parents, or our grandparents, or our great-grandparents once lived in Europe; for many years ago all the white people of the world lived in Europe, southwestern Asia, and northern Africa, and most of the white people in the world still live there. So we call the central and northwestern parts of the Eastern Continent the home of the white people, or of the *Caucasian race.* When our ancestors came to America to live they left relatives behind, some of whose great-grandchildren are still living there; so nearly all of us have distant relatives now living in some part of Europe, and this makes Europe particularly interesting to us.

One of the first white men who came to America was Christopher Columbus. He

THE ROUTE OF COLUMBUS.

sailed from the place where we landed on the Eastern Continent, as shown by the dotted line on the map (page 11). From what grand division did he sail? That part of Europe from which he started is called Spain, and is the home of the Spanish people.

From the point where we landed, trace on the map the shore of Europe to the northeast. Close to the shore you will notice two large islands. Part of the larger island is called England, and is the home of the English people.

Probably more white people have come to America from these islands and from Spain than from any other part of Europe.

TOPICS FOR ORAL OR WRITTEN WORK

(*Answer in Sentences*)

I. THE EASTERN CONTINENT. Why is it useful to us? Why is it interesting?

II. WHITE MEN IN AMERICA. Where is the home of the white race? Who was Christopher Columbus? Why are England and Spain especially interesting to Americans?

HOMES OF THE RACES OF MANKIND

Where is the home of the Caucasian race? Have you ever seen any negroes? Chinamen? Indians?

How does the color of negroes differ from that of white men? How does their hair differ? Negroes usually have broader and flatter noses, and thicker lips, than white men.

Find Africa on the map. In what part of the Eastern Continent is it? The ancestors of every negro in this country came from Africa, for Africa is the home of the *black*, or *Negro*, *race*, and most of the negroes in the world still live in that grand division.

CHINESE.

INDIAN.

NEGROES.

Negroes have lived in this country so long that those we see here speak and dress in much the same way as white people; but the first negroes who were brought to America were poor ignorant savages, and many of the negroes in Africa are still savages. They live in rude and dirty huts made of mud and grass, and wear little clothing.

MALAYS.

There is another kind of people that we sometimes see in this country. They have yellowish skin, and slanting, almond-shaped eyes, and each of them wears his hair in a long braid. They dress in a manner that seems odd to us, wearing loose jackets and queer shoes, and many of those living here are laundrymen. These people are Chinese, and they belong to the *yellow*, or *Mongolian*, *race*.

The home of this race is in eastern and northern Asia. Though there are but few yellow people in our country, very many live in Asia. There are about as many yellow people in the world as there are white people.

The people that live in the extreme southeast of Asia and in the neighboring islands are somewhat different from the yellow race; their eyes do not slant, and their skin is of a brownish color. They are called Malays. The great islands southeast of Asia are the home of the *brown*, or *Malay*, *race*.

When the white men first came to this country, the only people they found here had long, coarse black hair, and reddish-yellow skin. Most of them lived in huts or wigwams made of skins or bark. They wore little clothing, and passed their time in hunting or fighting with bows and arrows. The white men called them Indians.

There are now many more white people than Indians in America; but the Indians used to be the only inhabitants, and all the red men in the world still live there, so America is said to be the home of the *red*, or *Indian*, *race*.

TOPICS FOR ORAL OR WRITTEN WORK

(*Answer in Sentences*)

I. RACES OF MANKIND. Name the five races of men. Where is the home of each race?

II. RACES IN AMERICA. Name and describe the first race that lived here. The second. What other races of men have you seen?

THE PEOPLE DRESS IN STRANGE FASHIONS.

OUR JOURNEY EASTWARD COMPLETED

Look at the map on p. 11. In what direction from home did we travel to reach our landing place in Europe? Let us continue our journey to the east across the Eastern Continent.

We can go into a steamship again, and sail through the narrow passage south of Spain into the broader body of water which you see on the map between Europe and Africa. Such a narrow passage connecting larger bodies of water is called a *strait* or *channel*.

The broad body of water into which we have sailed is called the Mediterranean Sea. Its name means a sea "in the midst of the land."

How long did it take our steamer to cross the Atlantic? The Mediterranean Sea is about two thirds as long as the Atlantic Ocean is wide. About how long, then, will it take our steamship to reach the Isthmus of Suez? We will leave the ship there.

Near the Isthmus of Suez are many of the places told about in the Bible. At the African end of the isthmus is the "Land of Egypt." Near by in Asia is the place where Joseph was sold by his brethren, and not far away is the place where Jesus lived.

IN THE NARROW AND CROWDED STREETS.

But we must push onward to the east, for it will take us many months to cross Asia to the shore of the Pacific Ocean. We must travel on camels or on horses, and we shall not see many wagons or carts, for there are few good roads. The people dress in strange fashions; they have odd manners, and speak in languages that we do not understand. Much of our way lies over sandy or rocky deserts. Then we climb over mountains so high that their tops are above the clouds.

After a time we descend into lowlands where there are very many people. We pass through many large towns and cities, where most of the houses are only one or two stories high, and where there are few horses, carts, or wagons in the narrow and crowded streets. We can not understand what the people say, but we see that each man wears a braid and has yellow skin and slanting eyes like our laundryman at home. They are Chinese, and this is the home of the yellow race.

At length we reach the end of the land, and the ocean once again extends far out to the eastward before us. What is the name of the ocean east of Asia? (map, p. 11.) Here we find steamships with white men on them, and we sail away from the shore.

We gradually lose sight of the land, and sail on and on, always to the east, with nothing in sight but sky and water. Probably we begin to doubt if there is any land ahead of us, for we keep on sailing more than twice as long as it took to cross the Atlantic.

At last, however, land appears before us, and our voyage is ended; we have crossed the Pacific Ocean and have reached the western shore of another continent.

The shape of the continent is shown on this map. What is its name?

TOPICS FOR ORAL OR WRITTEN WORK

(*Answer in Sentences*)

I. The Journey. From what continent did we start when we crossed the Atlantic Ocean? In what direction did we go? What grand division did we reach? When we continued our journey toward the east, what grand division and what ocean did we cross?

II. Beginning and End of the Journey. From what shore of America did we start? What shore did we reach? Explain how this is possible.

OUR JOURNEY TEACHES THE SHAPE OF THE EARTH

Stick a pin into an orange or ball, as in the picture below. Beginning at the pin, move a pencil point around the orange in the same direction until it reaches the pin again.

The continent of America, on which we live, the Eastern Continent, and the oceans on which we have traveled, are parts of the surface of a great ball, which we call the *earth*. In our long journey eastward, over sea and over land, we traveled around this ball until we came again to the land from which we started.

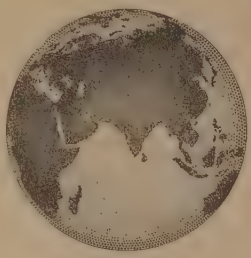
Pretend that an orange is the round earth, and that the pin in it is the place where you live. Trace several journeys around the orange from the pin, each in a different direction. If you journey far enough, you always reach the pin again. If you should journey on the earth in any direction from your home, and continue without turning to the right or to the left, you would finally reach your home again, because the earth is round like an orange.

The earth seems to us flat instead of round, because it is so large, and we are so close to it, that we can see but a small part of it. From a great height in the sky we might see that the earth is round, and it would look something like one of the pictures on the next page. Each picture shows one half of the earth, while the picture beside it shows the other half.

A perfectly round body is called a *sphere*. *Hemisphere* means "half a sphere," and as

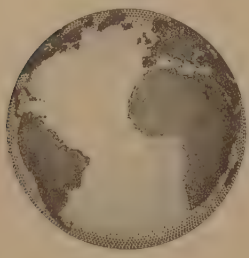
the earth is nearly a sphere, a map or picture of half the earth is called a map or picture of a hemisphere.

WESTERN HEMISPHERE.

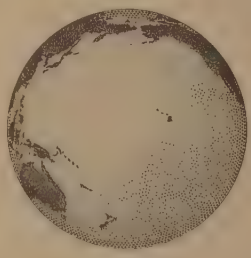


EASTERN HEMISPHERE.

Look at the two pictures above. Notice that the continent of America stretches across one side of the round earth. This half of the earth is called the Western Hemisphere. The Eastern and Australian continents are on the opposite side of the earth. That half of the earth is called the Eastern Hemisphere.



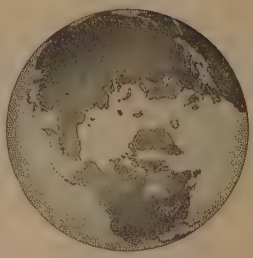
ATLANTIC OCEAN.



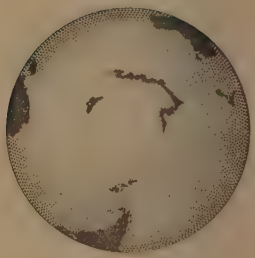
PACIFIC OCEAN.

In these two pictures you see the Atlantic Ocean stretching across one side of the earth, and the Pacific Ocean covering almost all of the opposite side. The Pacific Ocean is much wider than the Atlantic Ocean.

The next two pictures show the Northern Hemisphere from over the most northern point of the earth, and the Southern Hemisphere from over the most southern point. You see that about half of the Northern Hemisphere is land, but that almost all of the Southern Hemisphere is covered with water. Thus about three fourths of the earth's surface is water; only about one fourth is land.



NORTHERN HEMISPHERE.



SOUTHERN HEMISPHERE.

The ocean about the most southern part of the earth is called the Antarctic Ocean.

TOPICS FOR ORAL OR WRITTEN WORK

(*Answer in Sentences*)

I. THE EARTH. What is its shape? How did our journey suggest this? How much of its surface is land, and how much water?

II. THE LAND. Name the continents. In which hemisphere is each?

III. THE WATER. Name the five oceans. Tell where each ocean is.

THE TURNING OF THE EARTH

The earth, on which we live, is always turning slowly around toward the east. This motion of the earth makes the sun *appear* to rise in the morning, to move westward across the sky during the day, and to set in the evening. It is really the earth that moves.

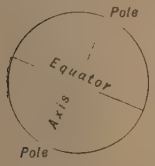
The turning of the earth once around in front of the sun makes day and night. We divide this time into twenty-four hours.

Again pretend that the orange is the round earth. Pin a postage stamp near the middle of one side of it for America, and a larger piece of paper on the other side for Asia. Stick a knitting needle or hat pin through the center of the orange, from the stem, and hold it in front of the candle on the teacher's desk, as in the picture at the top of the next page. We will pretend that the candle is the sun. Now, twirl the pin so as to make the orange *turn slowly*. Notice how America and Asia are brought by this turning, first into the

light, or day, and then into the shadow, or night, and then into the light again.

When it is day in America it is night in Asia. In about twelve hours, however, the earth will turn so far that Asia will be toward the sun, and America away from it. It will then be day in Asia and night in America.

Imagine a line passing through the center of the earth, from one side to the other, around which all parts of the earth move as it turns. We call this imaginary line the earth's *axis*. One end of the axis is at the most northern point of the earth, and is called the *north pole*. The other end of the axis is at the most southern point, and is called the *south pole*.



Imagine a line passing around the earth just halfway between the poles. This line divides the earth into the northern and southern hemispheres, and is called the *equator*. The equator extends exactly east and west.

TOPICS FOR ORAL OR WRITTEN WORK

(*Tell about Each Topic in Sentences*)

I. The Motion of the Earth. The direction in which it turns. The time which it takes to turn once. The divisions we make of that time.

II. The Result. Apparent motion of sun. Day and night.

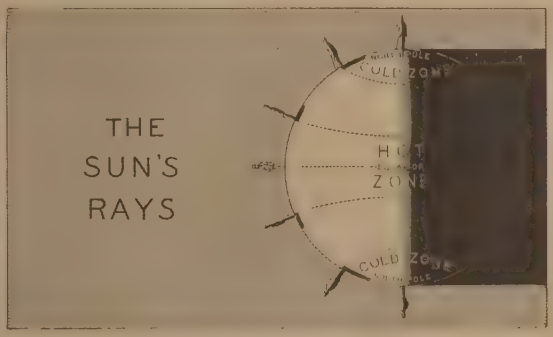
III. Lines and Points. The axis. The north pole. The south pole. The equator.

If desired, Latitude and Longitude may now be studied, from the last lesson in the book.

THE ZONES

Why is it day with us during only part of the time? What, then, do we get from the sun? Is it generally warmer in the daytime or at night? Why? What, then, besides light do we get from the sun?

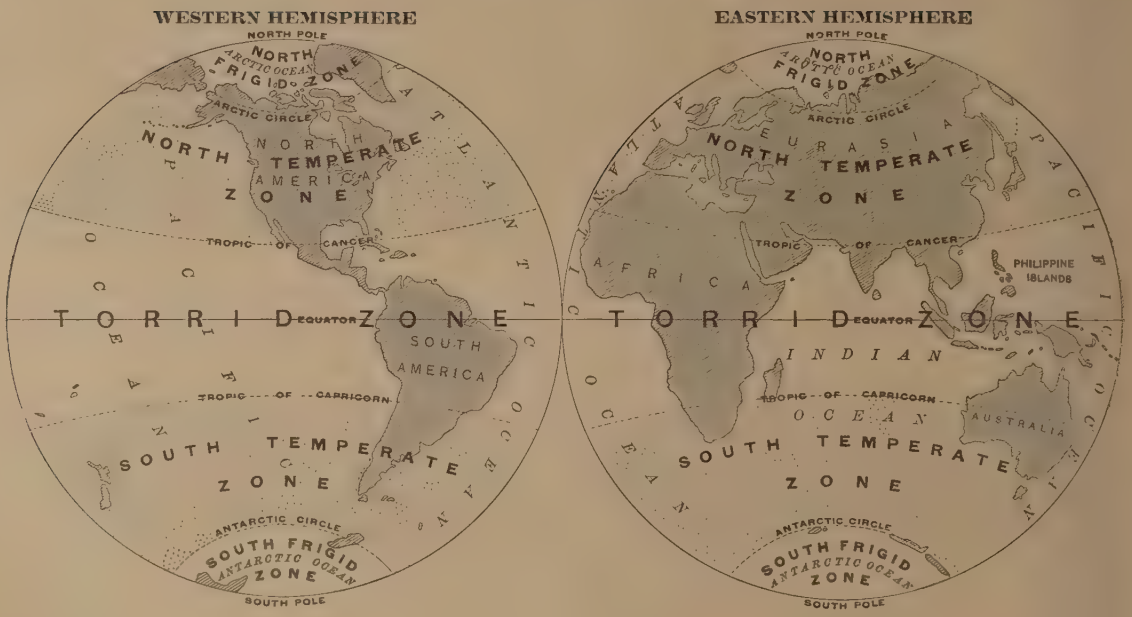
What part of the day is the hottest? Is the sun low or high in the sky during the middle of the day? Does the sun give us more heat when it is nearly overhead, or when it is low in the sky?



The Sun's Rays in the Different Zones.

Look at this picture; to which man does the sun seem to shine from directly overhead? On what part of the earth is that man standing? There is a broad belt, or *zone*, midway between the poles, in some part of which the sun is always directly overhead at noon. In that zone the days and nights are each about twelve hours long; the weather is warm all the year; and where there is enough rain the trees and grass are always green. This belt is called the *hot*, or *torrid*, *zone*.

To which two men in the picture does the sun seem low down in the sky? In the parts of the earth near the poles the sun is never high in the sky, and in winter it may not rise at all for several weeks. In midsummer it does not set, but seems to circle around the sky near the horizon. The winter is so long and cold that only a few kinds of plants live there. Those parts of the earth are called the *cold*, or *frigid*, *zones*. There is a



north frigid zone around the north pole, and a south frigid zone around the south pole.

Between the hot and the cold zones the sun is never quite overhead, and the weather is neither so hot in summer as in the torrid zone, nor so cold in winter as in the frigid zones. There are two of these belts. One is called the *north temperate zone;* the other, the *south temperate zone.*

In which zone is the sun nearly overhead at noon? In which zones do shadows fall toward the north at noon? In which zones do shadows fall toward the south at noon?

In the temperate zones, spring, summer, autumn, and winter follow one after another; but when it is winter in the north temperate zone, it is summer in the south temperate zone. In which season do most of the trees and plants begin to grow and put forth leaves and flowers? In which are they covered with leaves and fruit? When do they shed their leaves? When do they seem dead and bare? We live in the north temperate zone. When the trees near our home are covered with fruit, the trees in the south temperate zone are without leaves and seem dead and bare.

IN THE FRIGID ZONE.

In summer the days are longer than the nights in the temperate and frigid zones, but in winter they are shorter. The nearer to the poles we go, the longer we find the the days of summer and the nights of winter; until finally, at the poles themselves, we should find that daylight lasts all summer,

and the darkness of night lasts nearly all winter.

What zone lies around the north pole? around the south pole? Through which zone does the equator pass? Where is the north temperate zone? the south temperate zone? Name the five zones from north to south.

What is the name of the line at the edge of the north frigid zone? of the south frigid zone? at the northern edge of the torrid zone? at the southern edge? Name these lines in order, beginning at the north.

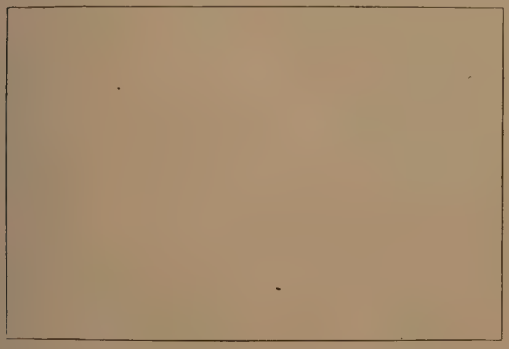
TOPICS FOR ORAL OR WRITTEN WORK

(*Tell about Each Topic in Sentences*)

I. ZONES. What a zone is. Where each zone is.
II. LENGTH OF DAY AND NIGHT. In the torrid zone. In the frigid zones. In the temperate zones.
III. HEAT. Where heat comes from. Where the sun is when it gives us the most heat. Why the torrid zone is hot. Why the frigid zone is cold.

THE SCALE OF MAPS

Here is a drawing, or plan, of the floor of a room which is 24 feet long and 16 feet wide.



The right side of the plan represents the east side of the floor. The plan is like the floor in shape, but is much smaller. The floor is 24 feet long; how many inches long is the plan? If 3 inches on the plan represents 24 feet on the floor, 1 inch on the plan represents 8 feet on the floor. The floor is 16 feet wide. Find by measuring if 1 inch in the

PLAN OF A SCHOOLROOM.

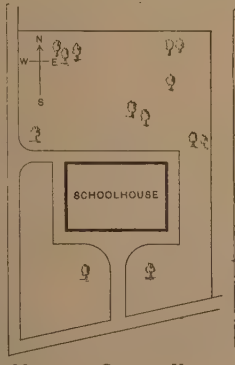
width of the plan stands for 8 feet in the width of the floor. The plan is said to be drawn *on a scale of* 1 *inch to* 8 *feet.*

On the same scale, draw the floor plan of another room which is only half as large as the first; that is, 12 feet one way and 16 feet the other way. If you draw this plan correctly, you will find that it is just half as large as the first. If plans are drawn on the same scale, you can tell by comparing them just how much larger one room is than the other. If you know the scale on which the plan is drawn, you can tell from it the real size of the room.

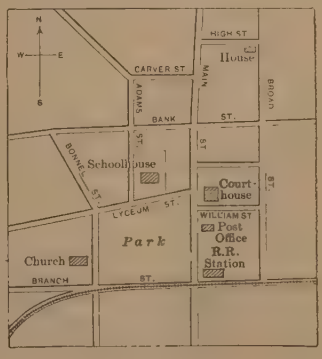
Which is the east side of your schoolroom? How many feet long is the room? How many feet wide is it? Draw a plan of the schoolroom floor, making the right side of your plan represent the east side of the floor. Your teacher will help you to draw it to a scale. Show upon your plan the places for the doors, windows, desks, and other objects in the room.

How long is the school yard? How wide is it? In what part of it is the schoolhouse? Make a plan, or map, of the yard; show the location of the gate and of the schoolhouse.

In what direction does your schoolhouse



MAP OF A SCHOOL YARD.



MAP OF A TOWN.

front? On what street or road is it? In what direction does the street extend?

On what street is your home? In what direction is it from the schoolhouse? Make a map showing the location of the schoolhouse and of your home.

The pupils may help the teacher to make upon the blackboard a map showing the principal streets and buildings of the town. Each pupil may try to make such a map himself. Write the names of the different places on the map. Maps are usually so made that the top of the map represents north, and the right-hand side, east.

NORTH AMERICA. (Same scale as the maps of South America, Eurasia, Africa, and Australia.)

NORTH AMERICA

POSITION AND SHAPE

In what continent do we live? In what grand division of that continent? In a former lesson we studied a map of North and South America together; a larger map of North America by itself is shown on the opposite page.

What circle crosses the northern part of North America? What tropic crosses the southern part? What zones do these lines separate? (map, p. 18.) In what zones is North America?

What ocean is north of North America? east? south and west? With what land is North America connected on the southeast? What connects them? What land is shown in the northwest corner of the map? What strait separates North America from Asia? What is a strait?

If you should sail west from North America across the Pacific, what continent would you reach? Which side of it? If you should sail east from North America across the Atlantic, what continent would you reach? On which side of it would you land?

Which side of North America is longest? Where is North America widest?

Is the coast line on any side of North America a straight line? Point to one or more places where a part of the ocean extends far into the land. A body of water extending into the land from a larger body of water is called a *gulf*, *bay*, or *sea*.

POLAR BEARS SWIM TO THE ICE.

What large bay is in the northern part of North America? What strait connects it with the Atlantic Ocean? The strait and the bay were named after Captain Henry Hudson, who was one of the first white men to sail into them. While in this bay, his men sailed away with the ship, leaving Hudson and his son in a little boat to die from cold and hunger.

What strait and bay are west of Greenland? *Icebergs*, or great blocks of ice larger than the largest house, can be seen floating in these waters, and also vast fields of ice. Seals, walruses, and other animals that live in cold water often climb upon the floating ice, and great white or polar bears sometimes swim to the ice to catch and eat these animals.

What gulf is in the extreme east of North America? The part of the ocean near the Gulf of St. Lawrence is one of the best places in the world for catching codfish and mackerel.

What large gulf is in the southern part of North America? What sea is north of the Isthmus of Panama? What long, narrow gulf is on the west coast of North America?

What sea is in the northwest, between North America and Asia? Most of the seals whose fur is made into sealskin muffs and jackets are killed in this sea. What strait connects this sea with the Arctic Ocean? What is a gulf, bay, or sea?

Just south of the Gulf of St. Lawrence find a part of the mainland that extends out into the ocean so as to be nearly surrounded by water. A portion of land thus extending from a larger body of land and nearly surrounded by water is called a *peninsula*, a word which means "almost an island." What is the name of this peninsula? The Acadians, about whom Longfellow wrote in the poem "Evangeline," lived in Nova Scotia.

What peninsula is between the Gulf of Mexico and the Atlantic Ocean? What peninsula is between the Gulf of Mexico and the Caribbean Sea? What long, narrow peninsula is in the southwest of North America?

Draw an outline map of North America like the small one here given, but larger and without the islands. Compare it with this one, and find your errors. Practice sketching this map on the blackboard and on paper until you can draw a good outline of North America in two minutes.

ISLANDS

On which side of North America are most of the islands? Name the largest island north of the mainland. What island is east of Greenland? In what zones is Greenland? Most of this island is always deeply buried under snow. The first white men to visit it were sailors from Iceland. They found a small part of it covered with grass; this they called Greenland; then this name was given to the whole island.

What island is east of the broadest part of North America? This island was visited by English sailors a few years after Columbus came to America. Icebergs from Greenland often float as far south as Newfoundland before they melt away.

What islands are east of the Gulf of Mexico? Columbus was the first white man who visited these islands. Until the time of Columbus few people believed the earth to be round, and no one knew of any Western Continent. When people went to Asia from Europe they traveled eastward, as we did in crossing the Eastern Continent. Columbus thought that he could reach Asia quicker by sailing westward around the earth. When he landed on these islands he thought he had reached the Indies in Asia; so he called the people Indians, and afterward the islands were called the West Indies. In what zone are most of these islands?

What island is near the middle of the west coast of North America?

TOPICS FOR ORAL OR WRITTEN WORK

I. Location of North America. Zones. Bordering oceans.

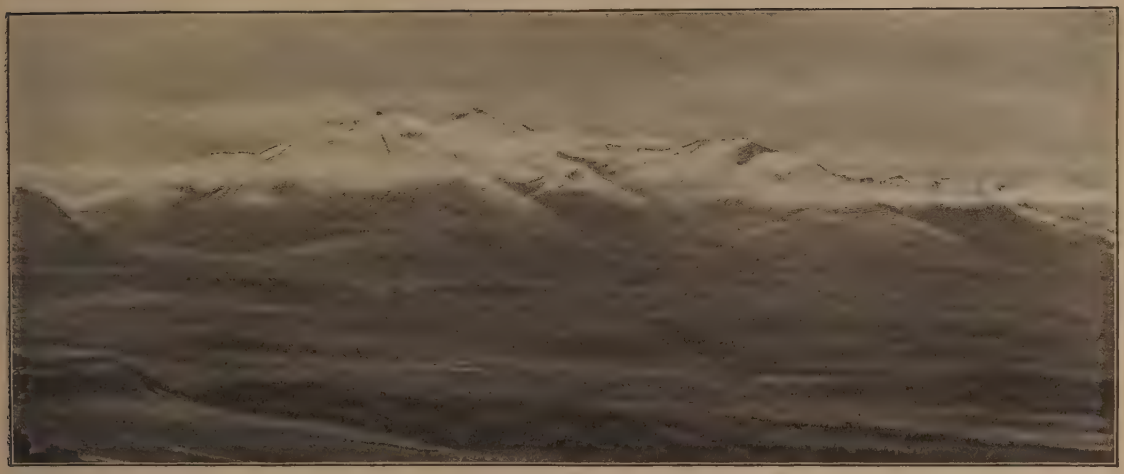
II. Shape. General shape. Compare the three coast lines in length. Describe one coast line: general direction; gulfs, bays, and seas; peninsulas; islands.

MOUNTAINS

The map on p. 20 shows by the smooth and even shading where the surface of the land is smoothest and flattest, and by the broken and irregular shading where the surface is most broken into steep slopes.

In which part of North America does the surface seem most uneven? The whole western part of North America is broken by mountains.

Are the slopes of the hills which you have seen gentle, or steep? Are those hills as high as a church spire? Are they as high as the clouds? Some hills are so high that their tops are often hidden in the clouds. Such hills are called *mountains*. But not all mountains are as high as the clouds: any hill that is quite steep and much higher than the surrounding country is likely to be called a mountain.



HIGH AND STEEP HILLS ARE CALLED MOUNTAINS.

Very many of the mountains in the western part of North America are higher than the clouds.

Some hills stand by themselves and are surrounded by low land, to which they slope down on all sides. More often, however, hills extend in long lines with slopes on but two sides, like the ridge of a roof. Such a line of hills is called a *ridge* or a *range*. A number of ranges near

A LINE OF HILLS IS CALLED A RIDGE OR A RANGE.

one another and extending in about the same direction, form a *chain* of hills or mountains.

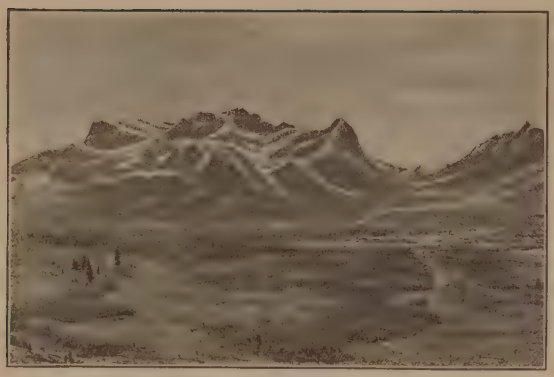
In what direction do most of the ranges in western North America extend? What is the name of the longest mountain chain? The Rocky Mountains extend nearly the whole length of North America. In the north they are always covered with snow, and even near their southern end, in the torrid zone, some of the higher points, or *peaks*, are snow-covered throughout the year; for the higher we go, the colder we find the air to be, so that even in the torrid zone, if the land is high enough, we find ice and snow.

What three long ranges are west of the Rocky Mountains? A broad *highland* extends from these ranges eastward beyond the Rocky Mountains. In it are many short mountain ranges and deep narrow valleys, called *canyons*. This highland, with its many mountain ranges, is much higher than any other part of North America, and is often called the *Rocky Mountain highland*.

Where this highland is widest, it occupies nearly half the width of North America. Where does it cover almost the whole width of the continent?

What other mountains are in North America? Near what ocean are they? Between what two gulfs and in what direction do they extend?

The Appalachian Mountains are much lower than the Rocky Mountains. Their



ROCKY MOUNTAINS.

highest summits are scarcely as high as the flat country at the foot of the Rocky Mountains. They are not high enough to be covered with snow all the year, and few are so high that trees and grass do not grow on their very tops. Thus they look very different from the higher mountains in the west. The Appalachian Mountains usually have smooth, flat tops covered with trees, while the western mountains are covered with trees only part way up their slopes, and have uneven tops of bare rock, with peaks often covered with snow or hidden by the clouds.

TOPICS FOR ORAL OR WRITTEN WORK

I. MOUNTAINS. A mountain. A mountain range. A mountain chain.

II. ROCKY MOUNTAIN HIGHLAND. Its location. Its direction. Its greatest width. Its borders.

III. APPALACHIAN MOUNTAINS. Their location. Compare with Rocky Mountains: in height; in appearance.

APPALACHIAN MOUNTAINS.

PLAINS

In the map on p. 20 what part of North America seems smoothest? Is there a place near your home where the ground, for a great distance in every direction, is smooth and nearly level? Such a place is called a *plain*.

The central part of North America is a vast plain. What mountains border this great central plain on the west? on the east? To what bay and ocean does the plain extend on the north? to what gulf on the south?

When you are walking on a street or road the ground is often so nearly level that you can not tell whether it slopes up or down. If, however, your path is alongside of a stream of water, even though it be flowing in the gutter, you can easily tell which way the ground slopes; since water always flows *down* a slope.

A SMOOTH AND LEVEL REGION IS A PLAIN.

Much of the great central plain of North America is so nearly level that one can not see its slope. On the map (p. 20) the *rivers*, or large streams, are shown by white lines, and they show you which way the plain slopes. You see that several of the rivers flow across the plain to the sea. Notice these rivers. They tell you that the northern part of the plain slopes down to the Arctic Ocean; that the central part slopes down to Hudson Bay and the Gulf of St. Lawrence; and that the southern part slopes down to the Gulf of Mexico.

The part of the plain near the Rocky Mountains is higher than the Appalachian Mountains, and should be called a *plateau*, a name usually given to high plains. The part of the central plain near the Appalachian Mountains, and the part between the Gulf of St. Lawrence and Hudson Bay, are low plateaus. These higher parts slope gradually

PART OF THE ATLANTIC PLAIN.

down to the central part of the plain, which is a broad, flat *lowland*. The picture at the bottom of p. 24 is part of this flat lowland.

East of the Appalachians is a narrow plain. What ocean borders it? Which way does this plain slope? It is called the *Atlantic plain*.

Model North America, showing the Rocky Mountain highland, the Appalachians, and the central plain.

TOPICS FOR ORAL OR WRITTEN WORK

I. PLAINS. A plain. A plateau.
II. GREAT CENTRAL PLAIN. Its location. Its borders. Its slopes. Its plateaus. Its lowlands.
III. ATLANTIC PLAIN. Its location. Its slope.

RIVER SYSTEMS AND SPRINGS

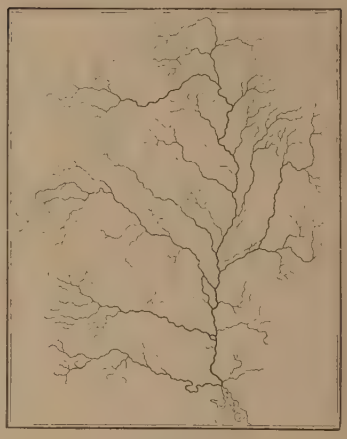
In what direction does the southern part of the central plain slope? What river shows this? The Mississippi is the largest river of North America. Several large rivers flow into it and are called its *branches*. Any stream is a branch of the stream into which it flows. Name two branches of the Mississippi flowing from the west. In what direction, then, does the western part of the central plain slope? Name one eastern branch of the Mississippi. In what direction does the eastern part of the central plain slope?

Hold this book open as shown in the picture. When held in this way the book forms a little trough with two side slopes and a bottom slope. This is like the great trough in the land in which the Mississippi flows, except that the land is not so smooth and regular. Such a trough in the land is called a *valley*.

How wide a valley have you seen in your walks? The Mississippi valley is hundreds of miles wide, and its side slopes are very gradual.

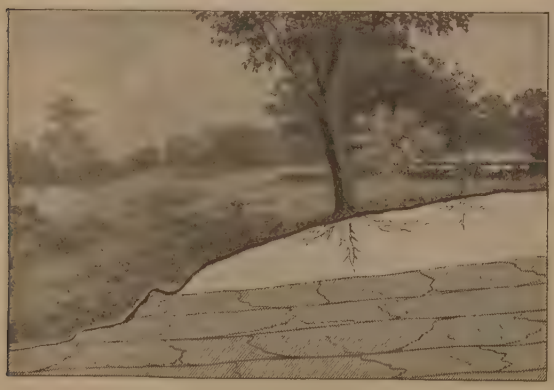
Let us travel up the Mississippi to the place where the Ohio joins it. This place is called the *mouth* of the Ohio. The place where any stream flows into another larger body of water is the mouth of the stream. Point (map, p. 20) to the mouth of the Mississippi; of the Arkansas; of the Missouri.

If we travel up the Ohio River from its mouth, we shall pass the mouths of many streams, for the Ohio, like the Mississippi, has many branches, though they are not shown on the map. If we ascend these branches, we shall find that they, too, have smaller branches, and these have still smaller branches, until the streams are mere little brooks. A river, with all its branches, big and little, is called a river *system*.



A River System.

When rain falls, some of the water flows directly into the streams, but much of it sinks into the ground. The ground can hold much water. The water-soaked ground often rests upon a bed of rock or clay, so that the water can not sink further, but trickles down until it reaches the surface and bubbles out as a *spring*, as shown in this picture.



A Section through a Spring.

When you walk in the country, and come to a spring, you will know that the water bubbling out into the little pool fell as rain, perhaps weeks before, and has been creeping along underground ever since. So water may flow from springs throughout dry seasons.

There are many such springs in the central plain, from each of which a little stream flows to join other streams and become part of the great Mississippi system. The place where a stream begins, or rises, is the *source* of the stream. It may be a spring, or a pond, or a marsh, or the melting snow and ice upon some mountain side. Point to the source of the Mississippi; of the Arkansas; of the Missouri.

TOPICS FOR ORAL OR WRITTEN WORK

I. Rivers. Define: river system; valley; spring; source; mouth.

II. Mississippi River System. Principal stream: source; direction. Chief branches. Mouth.

BASINS, FLOOD PLAINS, AND DELTAS

All the land which slopes toward any stream of the Mississippi system is in the Mississippi valley, or *basin*. A stream basin includes all the land drained by the stream and its branches. Point out the basin of the river in the picture below. Draw your pencil around the basin of the Mississippi River (map, p. 20).

Rain water is nearly clear when it falls, but in flowing over the ground it picks up thousands of tiny grains of soil and earth, and carries them along with it to the nearest stream. Hence after a shower the water of

A River Basin.

the stream contains millions of such grains of earth, which make it look muddy.

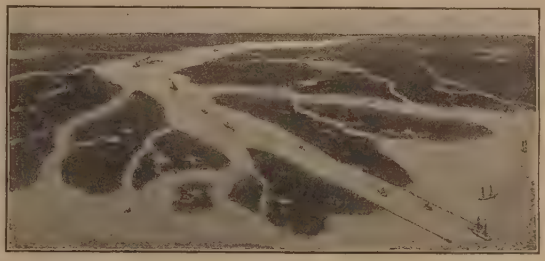
If the current of the stream is swift, it also picks up and carries away grains of earth and rock from its bed, and thus cuts its bed deeper into the land. Streams are always carrying earth from the highlands, but they carry much more after a shower than at other times.

Put a lump of earth into a tumbler of water, stir the water until it is very muddy, and let it stand awhile. As the water moves more slowly, the fine grains of earth which made it muddy settle to the bottom of the tumbler, until finally it becomes clear again.

So much earth is carried by the many streams of the Mississippi system that in the lower part of the Mississippi River the water is always muddy. The river often rises so high that it overflows its banks, and the muddy water covers the country on either side. This muddy water then ceases to flow so fast, and drops part of its load of earth. The land on both sides of the lower Mississippi is covered many feet deep with soil left in this way by the river. The plain thus built up by the river in time of flood is called its *flood plain*. Nearly all rivers have flood plains formed in the same way. Such plains are generally very fertile.

Strong embankments, or *levees*, are built along the banks of the lower Mississippi to keep the water from overflowing and destroying the towns and farms on its flood plain.

The current of the Mississippi is checked as it flows into the Gulf of Mexico, and much of the earth in its muddy water settles to the bottom. The bottom at this place is thus gradually built up until a fan-shaped tract of low marshy land is formed, through which the river empties by several mouths. This tract of land is called a *delta*. It is constantly being



A Delta.

built farther into the gulf. Many other rivers build deltas at their mouths in this way.

Model North America; show the three slopes of the Mississippi basin.

TOPICS FOR ORAL OR WRITTEN WORK

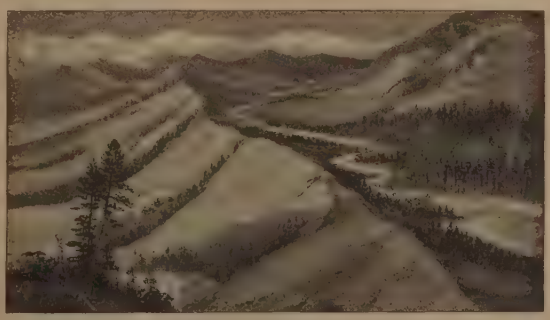
I. Mississippi Basin. Location. Extent. Surface: its two side slopes; its bottom slope.
II. Flood Plain; Delta. Explain each.

DIVIDES AND LAKES

Below is a picture of two stream basins, side by side. Point to the rim between them. It divides the streams of one basin from those of the other, and is therefore called a *divide*. A divide need not be very high, but it must be a little higher than the land on either side of it.

In what direction does the land north of the Mississippi basin slope? (map, p. 20.) Point to the divide between the Mississippi basin and the basins north of it. This divide, which extends across the central plain, is not very high. In some places the ground slopes from it on either side so gradually that it seems to be perfectly level.

North of the Mississippi basin are the basins of several large rivers.



The Rim between Two Basins is called a Divide.

What river flows down the east slope of the Rocky Mountains toward Hudson Bay? There is a great rocky dam across the lower part of its valley. When a river meets such an obstruction, it spreads out and must fill the hollow before it can flow over the dam and continue its course. Thus a pool of still water, or *lake*, is formed above the dam. How big a lake have you seen? The lake in the Saskatchewan basin is so big that at the widest part you can not see across from one shore to the other. What is its name?

What river flows into Lake Winnipeg? A river which flows into a lake is called an *inlet*. What river flows out of Lake Winnipeg? The river flowing out of a lake is called its *outlet*. A lake may have many inlets; but a lake seldom has more than one outlet.

THE POOL OF STILL WATER IS A LAKE.

What river flows down the east slope of the Rocky Mountains into the great central plain and then turns northward and flows to the Arctic Ocean? What three lakes are in the Mackenzie basin? There are thousands of lakes in this part of the central plain, but only the largest are shown on the map. Point to the divide between the Saskatchewan and Mackenzie basins.

What three great river basins have you found in North America which extend as far west as the Rocky Mountain highland? What other river basin slopes from this highland, to the Gulf of Mexico? Which is the only great basin in the central plain that does not extend so far west as the Rocky Mountain highland? Draw a line around the St. Lawrence basin. What lakes are included in it? These are called the Great Lakes because of their size. One of them is the largest fresh-water lake in the world.

Toward what oceans do the great basins that we have studied slope? Toward what ocean and from what mountains do the other great basins of North America slope? So the Rocky Mountain highland divides North America into two great slopes, a slope toward the Pacific on one side, and a slope toward the Arctic and Atlantic on the other side. This great divide between the eastern and western slopes of North America is called the *continental divide*. For much of its length it lies along the top of the Rocky Mountains.

What is the most northern river of the Pacific slope? Into what sea does it flow? What river flows directly into the Pacific? Into what gulf does the Colorado flow?

Sketch North America, and show the principal rivers.

TOPICS FOR ORAL OR WRITTEN WORK

I. DIVIDES. Definition. Continental divide: position; slopes into which it divides North America.
II. SLOPES. Rivers and lakes in the Atlantic slope. In the Arctic slope. Rivers in the Pacific slope.

PEOPLE AND SUBDIVISIONS

The map on the next page shows, by means of the little dots, the parts of North America in which most of the people live. In the parts where the dots are closest together the number of people is greatest, but in the places where there are few or no dots very few people live.

It will be seen that most of the people of North America live in two great groups. One of these groups is in the eastern part of America, south of the Great Lakes. The

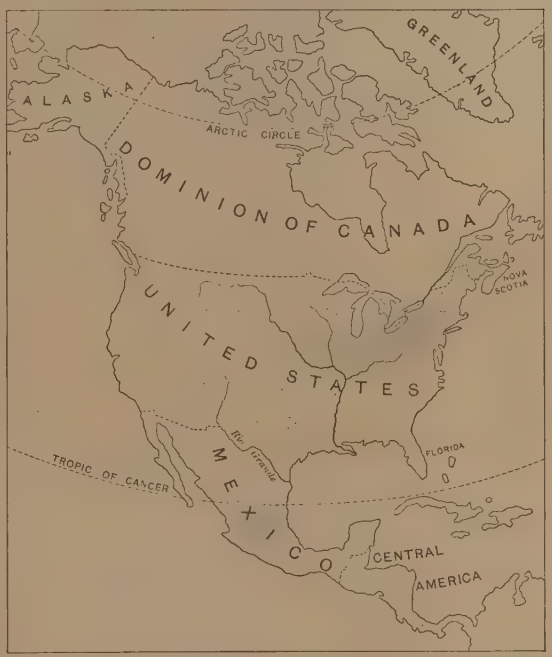
other group is in the southern part west of the Gulf of Mexico. Hardly any one lives in the cold northern part of America, and few people live on the Rocky Mountain highland, except in the south.

Because Englishmen discovered Newfoundland and the lands near it, the English people claimed nearly the whole of North America, and England owns the northern part to this day. This part is called the Dominion of Canada. Find it on this map.

The English once owned the eastern part of North America, south of Canada, and many people came from England to live there. But later these settlers rose against the king of England, and took the country south of Canada for their own. They named this country the United States. Since then other regions have been added to it, so that it now extends across North America from the Atlantic to the Pacific Ocean, and is one of the greatest and richest countries in the world. It is the country in which we live. Find it on this map. Find Alaska on this map. It belongs to the United States.

As Canada belongs to England, and as most of the white people who first settled in the United States came from England, the English language is spoken by most of the people in these countries.

The part of North America west of the Gulf of Mexico and the Caribbean Sea was settled by white men who followed Columbus to America from Spain. Most of the people living there still speak the Spanish language, and might not understand us if we talked to them in English. For a long time the king of Spain owned these countries and made laws for them, but at last his soldiers were driven away by the descendants of the Spanish settlers, who now own the countries and make laws for themselves.



PEOPLE ARE MOST NUMEROUS WHERE THE DOTS ARE THICKEST.

The country west of the Gulf of Mexico is called Mexico; the narrow strip of land between Mexico and South America is called Central America.

Find Mexico on this map. Find Central America. What language is spoken in these countries? What language is spoken by most of the other people in North America? What, then, is one important difference between the two great groups of people in North America? The Rio Grande may be said to separate the English-speaking from the Spanish-speaking people of North America.

Sketch a map of North America; show where most of the people live, and mark the boundary line between the English-speaking and the Spanish-speaking peoples.

TOPICS FOR ORAL OR WRITTEN WORK

I. PEOPLE OF NORTH AMERICA. In what parts most of the people live. How they are divided according to their language.

II. ENGLISH NORTH AMERICA. Countries. To whom each belongs.

III. SPANISH NORTH AMERICA. Countries.

THE UNITED STATES. (Same scale as the relief map of Europe.)

POSITION AND COAST LINE

What ocean is east of the United States? west? What gulf is south? Put your pencil on the northern boundary line of the United States; on the southern boundary line. What country is north of the United States? south? What tropic is a little south of the United States? In what zone is the United States?

The United States stretches across the central part of North America from the Atlantic to the Pacific Ocean — a distance of nearly three thousand miles. Its width from north to south is about half as much as its length from east to west. There are but few countries in the world as large as the United States.

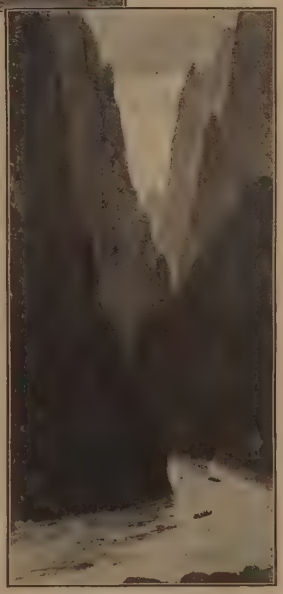
Our country lies in the warmer part of the north temperate zone. It is neither too cold for the growth of food plants, as much of Canada is, nor too hot for people to work comfortably, as are most of the countries lying in the torrid zone to the south of us. Our country is so large that there are many ways by which people can easily earn a living here. For these reasons it is not surprising that more people live in the United States than in all the rest of North America and South America together.

Do you find more bays on the Pacific or on the Atlantic coast of the United States? Bays are likely to contain natural *harbors*, or places where ships can find shelter from the wind and waves. Cities, called *ports*, are often built at good harbors, since ships can be safely loaded and unloaded there. Name four bays

A Lighthouse.

on the eastern coast; one bay on the western coast. There are great ports at good harbors on all of these bays.

At many places on the coast there are points of land extending into the water. These points are called *capes* or *headlands*. Lighthouses are often built on capes to guide and warn sailors at night. What cape is near Massachusetts Bay? Find Cape May; Cape Hatteras. Name one cape in Florida. Name two capes on the Pacific coast of the United States.



Colorado Canyon.

Make a sketch map of North America (see p. 22) and show on it the Tropic of Cancer and the Arctic Circle, and the United States.

TOPICS FOR ORAL OR WRITTEN WORK

I. Location of the United States. In North America. In the zones.
II. Coast Lines. Number. Bays on each.
III. Advantages. For plants. For people.

RELIEF AND DRAINAGE

Is the eastern or the western half of the United States the more mountainous? (map, p. 30.) What two ranges are near the west coast? What mountain chain is near the eastern coast? What long, high chain is west of the center? What plain is east of the Appalachian Mountains? What river drains most of the central plain? Name two western branches of the Mississippi; one eastern branch. What five large lakes are wholly or partly in the northern part of the United States? What river forms the outlet of these Great Lakes? What river drains the southeastern part of the Rocky Mountain highland? the southwestern part? Into what does each flow? What river drains the northwestern part? What large branch has the Columbia?

The *Rocky Mountain highland* covers most of the western half of the United States, and is about a mile high. The highland is bordered on the west by the high ranges of the Sierra Nevada and the Cascade Mountains. The long Rocky Mountain chain crosses the highland near its center, and west of this are many short ranges. Many of these mountains have peaks nearly three miles high.

The Colorado River and the Snake River flow through the plateaus west of the Rocky Mountains. They are fed by melting snow on the mountains, and are cutting their channels deeper and deeper. As there is little rain in the Rocky Mountain highland region, but little earth is washed into these rivers from the sides of their valleys. So these valleys have become very deep and narrow canyons, through which the rivers rush along with very swift currents.

The dry highland region between the Colorado and Snake rivers is called the Great Basin, because its few streams do not reach the ocean. Some of the streams flow into lakes which have no outlet, but many of them sink into the sand. Lakes having no outlet generally contain salt water. The largest lake in the Great Basin has no outlet. What is its name?

East of the Rocky Mountains the highland is so flat and smooth that it is called the Great Plains, although it is really a high plateau. This region is too dry for trees to thrive, but most of it is covered with coarse bunch grass.

The Rocky Mountain highland is famous for its mines of gold, silver, copper, and lead, and its pasturage for sheep and cattle.

The Appalachian highland is much lower than the Rocky Mountain highland. It consists of several parallel ridges and a low plateau west of them. The general height of the Appalachian Mountains is less than half a mile, and the loftiest peaks are but little over a mile high.

These mountains are covered with forests, and contain vast stores of coal.

The Central Plain. Between the Appalachian Mountains and the Rocky Mountains the surface slopes gently downward to the lowland plain that forms the central part of the United States. It has a smooth surface, a fertile soil, and plenty of rainfall, and it is the greatest farming region in the world. There are forests near the Great Lakes in the north, and near the Gulf of Mexico in the south, but the central and western parts of this lowland are grassy *prairies*, with hardly any trees.

The Mississippi River flows through the central plain, and receives its great branches from both sides. Some of these rivers are deep enough for steamboats to ascend them from the Gulf of Mexico nearly to the foot of the mountains. Name two southern branches of the Ohio. Name three rivers besides the Mississippi that flow into the Gulf of Mexico.

The slopes of the central plain are generally very gentle: parts of the divide between the Mississippi valley and the Great Lakes are flat and swampy regions. No large rivers flow to the Great Lakes, but the lakes are deep and very large, and on them many steamers are used.

What river west of the Great Lakes flows north? The water of the Red River of the North finds its way, through Lake Winnipeg, into the Hudson Bay.

The *Atlantic plain* lies east of the Appalachian Mountains. In the north this plain is rather hilly, with swift streams and a rocky coast. In the south the plain is wide and flat, with a sandy coast; it joins the central plain south of the Appalachian Mountains, and, like it, is a farming region.

Trace the divide between the rivers of the Mississippi basin and those flowing across the

HUDSON RIVER GORGE.

Atlantic plain. You see that in the south the Atlantic rivers rise on the east side of the mountains. In the north, however, many of them rise west of the mountains and flow across the ranges in narrow gorges, or *water gaps*.

The rivers which flow into Chesapeake Bay, Delaware Bay, and New York Bay have cut deep water gaps through the mountains. These gaps are used for roads, railroads, and canals leading from the Atlantic plain to the central lowland. What river flows into New York Bay? The valley and water gap of the Hudson River form the lowest and most nearly level route across the Appalachian Mountains.

Sketch North America, mark off the United States, and show by lines the Sierra Nevada, Cascade, Rocky, and Appalachian chains. Show also the Mississippi, St. Lawrence, Colorado, and Columbia rivers, and their chief branches.

TOPICS FOR ORAL OR WRITTEN WORK

I. Western Highland. Extent. Height. Rivers. Great Basin.
II. Central Plain. Extent. Slopes. Rivers.
III. Appalachian Mountains. Extent. Height. Northern rivers. Southern rivers. Water gaps.
IV. Atlantic Plain. In the north. In the south.

Winter in the South.

Winter in the North.

The picture above is a scene in the northern part of our country in December. What is on the ground? The summer foliage is gone and the trees are covered with snow. The song birds have flown away to a warmer region.

The next picture shows a winter scene in the southern part of our land. The palmetto trees and other plants are in full leaf. Hidden among the leaves are many of the birds which flew away from the north on the approach of winter. The children in the southern part of our country know but little about sledding or snowballing, for in that warm land the little snow that falls melts quickly.

Oranges, cotton, sugar cane, and rice are among the plants that thrive only where the weather is warm, and these plants can be grown in the southern part of the United States. The climate of the central and northern part of our country is just suited, however, for such valuable food plants as corn, wheat, potatoes, and apples.

HEAT

The northern part of the United States lies about midway between the equator and the north pole. The summers are warm, but the winters in that part of the country are generally very cold. The southern part extends nearly to the torrid zone, and the weather there is nearly always warm and mild.

TOPICS FOR ORAL OR WRITTEN WORK

I. Changes of Temperature. In the north. In the south.

II. Plants. Some kinds that thrive in the north. In the south.

RAINFALL

How do we keep the grass on the lawn fresh and green during the dry summer months? How are the fields and forests watered? It is only where enough rain falls to make plants grow, or where they can be watered in some other way, that farming can be carried on.

Where does the rain come from? Can you guess how the water gets into the clouds? Why are clothes, after being washed, hung in the air? Where does their moisture go? It passes away in particles so tiny that they can not be seen as they mingle with the air. Water in this form is called *vapor*. Vapor is passing into the air nearly all the time from every damp object, and from the surface of every pond and stream, but most of all from the vast surface of the sea. Although sea water is salt and bitter, the vapor that rises from it is fresh and pure, its salt being left in the sea. When vapor mingles with the air, it is carried about by the winds, and thus much vapor from the sea is brought over the land. The air always contains some vapor, generally a great deal.

Vapor can not be seen, but it is easily changed back again into drops of water big enough to be seen. In a warm room fill a tumbler with ice water, and notice the drops of water that gather on the outside of the glass. The water could not come through the glass from the inside of the tumbler. Where, then, could it have come from? Cold air can not contain so much vapor as warm air, so when the warm air of the room was chilled against the cold glass, some of its vapor was changed into the little drops of water on the outside of the tumbler.

The air above the sea is loaded with much vapor. When it blows as wind to a colder region, it is chilled and part of its vapor is changed into countless tiny water drops or ice crystals. These float in the air and form *clouds*, or unite to make larger drops or flakes, which fall to the ground as *rain* or *snow*. Thus the rain comes from the clouds, the clouds come from the vapor in the chilled air, and the vapor in the air comes mostly from the sea.

The shaded part of the chart below shows where enough rain falls in our country to make farming most successful. Most of the winds of the United States come from the west and south. They reach the western coast loaded with vapor from the Pacific Ocean. They are chilled in crossing the lofty mountains near the coast, and most of their moisture falls as rain or snow on the western slopes of the mountains.

After losing their moisture these winds sweep over the western plateaus as dry winds. Parts of that region are so dry that few trees and food plants thrive there. Those parts

Shading indicates Plenty of Rain for Farming.

THE CAPITOL AT WASHINGTON.

are called *arid* regions. Regions so dry that very few or no plants can grow in them are called *deserts*.

The eastern half of the United States is watered chiefly by southerly winds which bring moisture from the Gulf of Mexico.

In what two regions of our country does much rain fall? In what region does but little rain fall? What regions are best for farming? Why?

TOPICS FOR ORAL OR WRITTEN WORK

I. A DROP OF WATER. Its home. How it got into the air. Where it traveled. How it became visible. In what form it fell to the earth. How it traveled back to the sea.

II. RAINFALL AND ITS EFFECTS. On the eastern lowland. On the western highland. On the Pacific coast.

HISTORY AND GOVERNMENT

What peninsula is in Canada just northeast of the United States? (map, p. 29.) What peninsula is in the southeastern part of the United States? What plain extends between these two peninsulas?

There were thirteen English *colonies*, or groups of settlements, lying along the Atlantic coast between Nova Scotia and Florida, when the early settlers in this country rose against the king of England (p. 29).

Then followed the Revolutionary War, in which the colonists united under the command of General Washington, drove the king's soldiers away, and forced the king to permit the colonists to govern themselves.

Each colony chose its own officers and made its own laws. A body of people that makes its own laws and governs itself may be called a *state;* so each colony now called itself a state.

As the colonists by uniting had been strong enough to drive away the king's soldiers, it was decided that the states should unite to form a strong nation, which was called the *United States*.

The lawmakers of this nation are chosen by the people of the various states. A government like that of the United States, in which the people choose their own officers, is called a *republic*.

Although most of the colonists lived east of the Appalachian Mountains, the land given up to the United States by the king reached as far west as the Mississippi River.

The western land was inhabited by Indians. It was not divided among the colonies, but

was held by the United States as *public land.* As the number of people in the east grew larger, some of them crossed the mountains and settled on the public land. When enough people settled in any part of this public land, that part was separated from the rest and admitted into the Union as a new state. This plan was followed not only with the public land east of the Mississippi River, but also with the wide region between the Mississippi and the Pacific Ocean which the United States afterward obtained in various ways.

As the public land has been gradually settled, state after state has been formed from it and admitted into the Union, until now, instead of thirteen, the United States contains forty-six states. Besides the states there are several *territories*, or divisions of the public land which have not yet become states. The United States also has possessions in the West Indies and in the Pacific Ocean.

The people of each state choose men who meet in the *capital* city of the state to make laws concerning state matters. The chief officer of a state is called the *governor.* He lives at the capital, and it is his duty to see that the laws are carried out.

The states, however, are joined in the great nation of the United States. Each state chooses men who go to Washington, the capital of the nation, to help make laws on matters of interest to all the states. The chief officer of the nation is chosen every four years, and he is called the *President.* He lives in the White House at Washington.

TOPICS FOR ORAL OR WRITTEN WORK

I. GROWTH. Number of original states. Location. Present extent of the United States. Present number of states.

II. GOVERNMENT. Definition of a state. The United States: its formation; its government.

Map Exercise. — For each day's lesson learn the name and location of each state in *one* of the columns under the map.

1st Lesson.	*2d Lesson.*	*3d Lesson*
Maine	New York	O-hi'o
New Hamp'shire	New Jer'sey	In-di-an'a
Ver-mont'	Penn-syl-va'ni-a	Il-li-nois'
Mas-sa-chu'setts	Del'a-ware	Ken-tuck'y
Rhode Is'land	Ma'ry-land	Mich'i-gan
Con-nect'i-cut	Vir-gin'i-a	Wis-con'sin
	West Vir-gin'i-a	

4th Lesson.	*5th Lesson.*	*6th Lesson.*	*7th Lesson.*	*8th Lesson.*	*9th & 10th Lessons.*
Min-ne-so'ta	North Car-o-li'na	Ar'kan-sas	Col-o-ra'do	Cal-i-for'ni-a	Review, until you can name and locate upon the chart on p. 39 every state and territory, when the colored map is covered up.
North Da-ko'ta	South Car-o-li'na	Lou-i-si-a'na	Wy-o'ming	Or'e-gon	
South Da-ko'ta	Geor'gi-a	Tex'as	Mon-ta'na	Wash'ing-ton	
Ne-bras'ka	Flor'i-da	Ok-la-ho'ma	I'da-ho		
I'o-wa	Al-a-ba'ma	New Mex'i-co Ty.	U'tah		
Mis-sou'ri	Mis-sis-sip'pi	Ar-i-zo'na Ty.	Ne-va'da		
Kan'sas	Ten-nes-see'				

FARMING, LUMBERING, AND HERDING

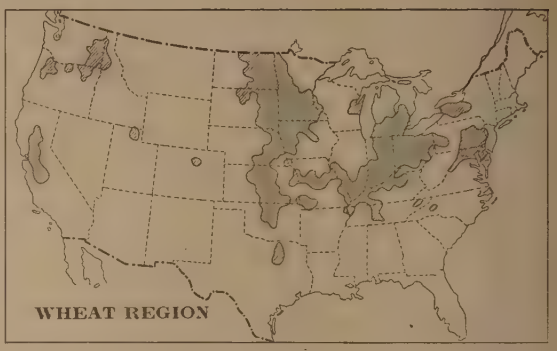
Nearly all the men in our country are engaged in some business, or *industry*, by which they earn a living for themselves and their families. Farming, lumbering, herding, mining, manufacturing, and commerce are the chief industries.

Farming, or agriculture, is the most important of all industries. Most food plants are grown on farms, and so is cotton, from which more cloth is made than from any other substance.

We have learned (p. 34) that the eastern half of our country is moist enough for farming, and we have also learned that the southern part is warm enough for cotton to grow.

This map shows the cotton-growing region of the United States. Make a list of the eleven states in this region. Corn and other food plants are grown, but cotton is the most important crop of this southern section. More cotton is produced here than in all the rest of the world.

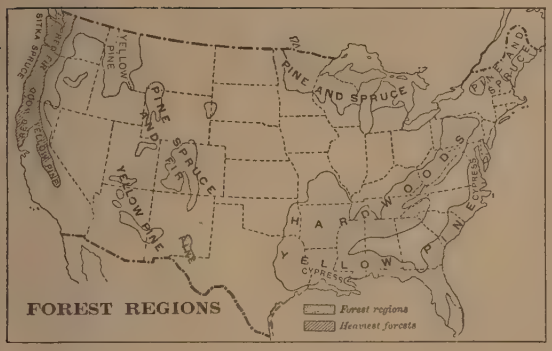
Of all farm plants which the people of this country use for food, wheat, of which flour is made, is the most important. Great quantities of potatoes and other vegetables are also eaten. Much corn, oats, and hay are grown on the farms, but they are fed chiefly to animals — hogs, horses, and cattle. All of these food plants grow best in a cooler climate than that needed for cotton.



These two maps show that most of our wheat and potatoes are grown in the northern or

cooler half of the moist eastern region. In this same northern section also most of the corn, oats, and hay are grown, and most of the hogs and cattle are raised. The northern section is thus the great food-growing region of the United States; it is one of the greatest food-growing regions in the world. Wheat, fruit, vegetables, and other farm plants are grown also in the moist region near the Pacific coast.

Lumbering. — In the lumbering industry the trees are cut down in the forests, trimmed of their branches, and cut into logs of proper length. Then the logs are often hauled by oxen or horses to the nearest stream and floated down to the sawmills. In some places railways are built into the forests to carry the logs to the sawmills; in other places the logs are pulled to the sawmills by cables.



This map of the forest regions shows that there are forests in both the food-growing section and the cotton-growing section. These forests are chiefly near the Great Lakes, on the Appalachian Mountains, and in the southern parts of the central and Atlantic plains. They are all great lumbering regions.

The heaviest forests in the country, however, are in the moist region of the Pacific coast, west of the Sierra Nevada and Cascade Mountains.

Most of the Rocky Mountain highland is too dry for trees to grow; but the mountain ranges and high plateaus receive more rain and snow than the rest of the highland, and in such places open forests are found.

Herding. — Although too dry for forests, much of the western highland receives enough rain for coarse grasses to grow. These grasses form excellent pasturage, and throughout this whole plateau section — both on the Great Plains and on the plateaus west of the Rocky Mountains — the herding of sheep and cattle is a leading industry.

The sheep are raised chiefly for their thick wool, which is clipped from the animals each year. The wool is sent to the East, where it is spun into yarn and woven into woolen cloth or into carpets. The clipping does not hurt the sheep at all, and their wool soon grows long again, just as your hair grows again after it is trimmed by the barber.

The cattle are raised for their flesh. When they reach the proper age, the animals themselves are driven into cattle cars and shipped east to the corn region, where they are fattened and then killed and converted into beef.

Herd of Cattle.

TOPICS FOR ORAL OR WRITTEN WORK

I. Sections. Great food-growing section. Two other farming sections. Herding section.

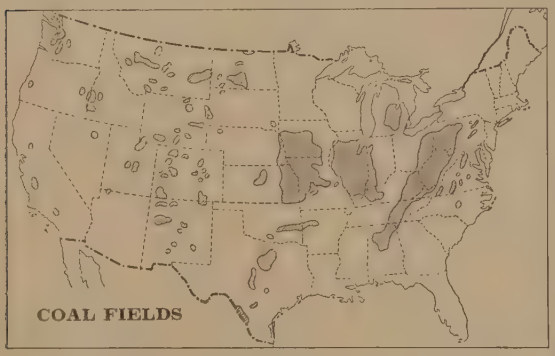
II. Products of Each Section.

In a Coal Mine.

MINING

Coal is the most valuable product of our mines. It is used for heating houses and for cooking, and also in the furnaces of steam engines and in making iron and steel. It is a mineral which is dug out of deep, dark mines far below the surface of the ground.

Coal is composed of parts of plants which ages ago grew on the surface of low swampy ground. As these plants died and fell, they gradually covered the ground with thick layers of vegetable matter. After a while these layers were covered with water, which washed mud and sand over them until they were deeply buried. In time the buried vegetable layers were pressed into coal, and the mud and sand over them were pressed into rock.



On this map find the three largest coal fields in the United States. Most of the coal mines are in these three fields and in the small fields east of them.

Metals. — Mention six articles made of iron or steel. Telephone and electric car wires are usually of copper. Iron and copper are the most useful of metals. They are obtained from rocks called *ores*.

More iron ore and copper ore are mined in the United States than in any other country, and also great quantities of gold and silver are mined. The rock containing these metals is often obtained, like coal, from deep mines. In some places, however, iron ore is found quite near the surface of the ground.

Gold is so valuable that, in regions of gold-bearing rocks, it often pays to dig up and wash the sands and gravels of streams in order to obtain the fine grains of gold which have been washed out of the rocks. This is called *placer* mining.

Iron ore is mined in many parts of the country, but most of it comes from near Lake Superior. Much iron ore is mined also near the southern end of the large eastern coal field.

Much copper ore is mined near Lake Superior, but most of the copper and the gold and silver come from the western highland, or plateau section, where these metals are mined in every state.

Petroleum. — What is burned in lamps to give light? Kerosene is made from rock oil, or petroleum, which is obtained from deep pipe wells.

Great quantities of petroleum are obtained in many parts of the United States, especially

Derricks and Tank at Oil Wells in California.

in California, Kansas, Texas, and Pennsylvania. Point out these states on the map.

At first the petroleum may spurt out of a new well with great force, but after a few days or weeks it must be pumped out, and finally the well "goes dry." Then another well is sunk. From the wells the petroleum is pumped through pipe lines, often many miles long, or sent in tank cars on railways, to the refineries. Here it is made into kerosene, vaseline, gasoline, and other things.

TOPICS FOR ORAL OR WRITTEN WORK

I. Mines. Kinds. Location of each. Products.
II. Oil Wells. Location. Product.

MANUFACTURING AND COMMERCE

The products from farms, pastures, forests, and mines are called *raw* products. Usually they must be changed in some way, or *manufactured*, to fit them for use. *Commerce* is the buying, selling, and transporting of the raw or manufactured products. The raw products are usually sent to cities and towns to be sold and manufactured, and the manufactured products are then sold and sent all over the world from the towns. Hence, large and prosperous cities and towns are located at places that can be easily and cheaply reached; otherwise, they would not have become large and prosperous.

Coast cities, therefore, are generally located at good harbors, often near the mouths of rivers having low valleys extending inland. Inland cities are generally located on rivers or at places where several railroads or common roads meet or cross one another. Manufacturing cities are likely to be located at waterfalls, where the water power may be used in turning machinery, or at some place where coal for making steam may be obtained cheaply.

Since manufacturing and commerce are carried on chiefly in cities and towns, these industries are more active in regions where there are many large cities and towns, than in regions where the towns are few and small.

On this map the dots represent the more important cities and towns of the United States. In what part of the country are the towns closest together? The northeastern part of the United States is one of the great manufacturing and commercial regions of the world.

In the part of this region east of the Appalachian Mountains more people are engaged in manufacturing and commerce than in any other industries. West of the Appalachian Mountains, in the great farming regions, many of the farm products are manufactured. At points convenient to the forests, are sawmills and furniture factories. At other points convenient to both the coal mines and the ore mines, iron and steel are made and shaped into rails, engines, machinery, and other forms.

Most of the towns in the United States are connected by railroads which aid in collecting the raw products and distributing the manufactured articles. Over these railroads many of our products are sent to the great coast cities, or seaports, where they are loaded on ships and sent as *exports* to foreign countries. The products of other countries which are brought into our country are called *imports*.

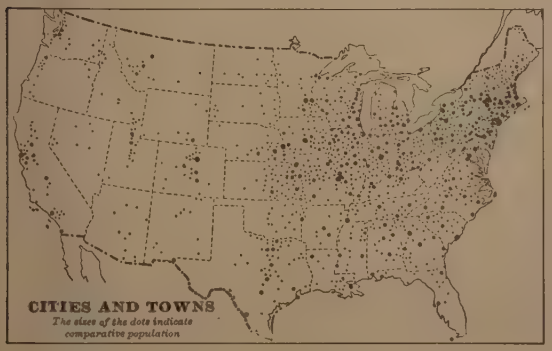
TOPICS FOR ORAL OR WRITTEN WORK

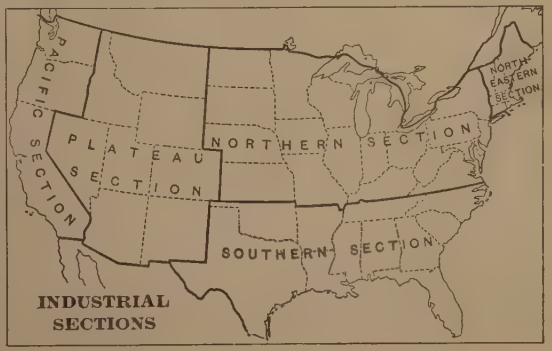
I. Cities and Towns. Where located. Chief industries.

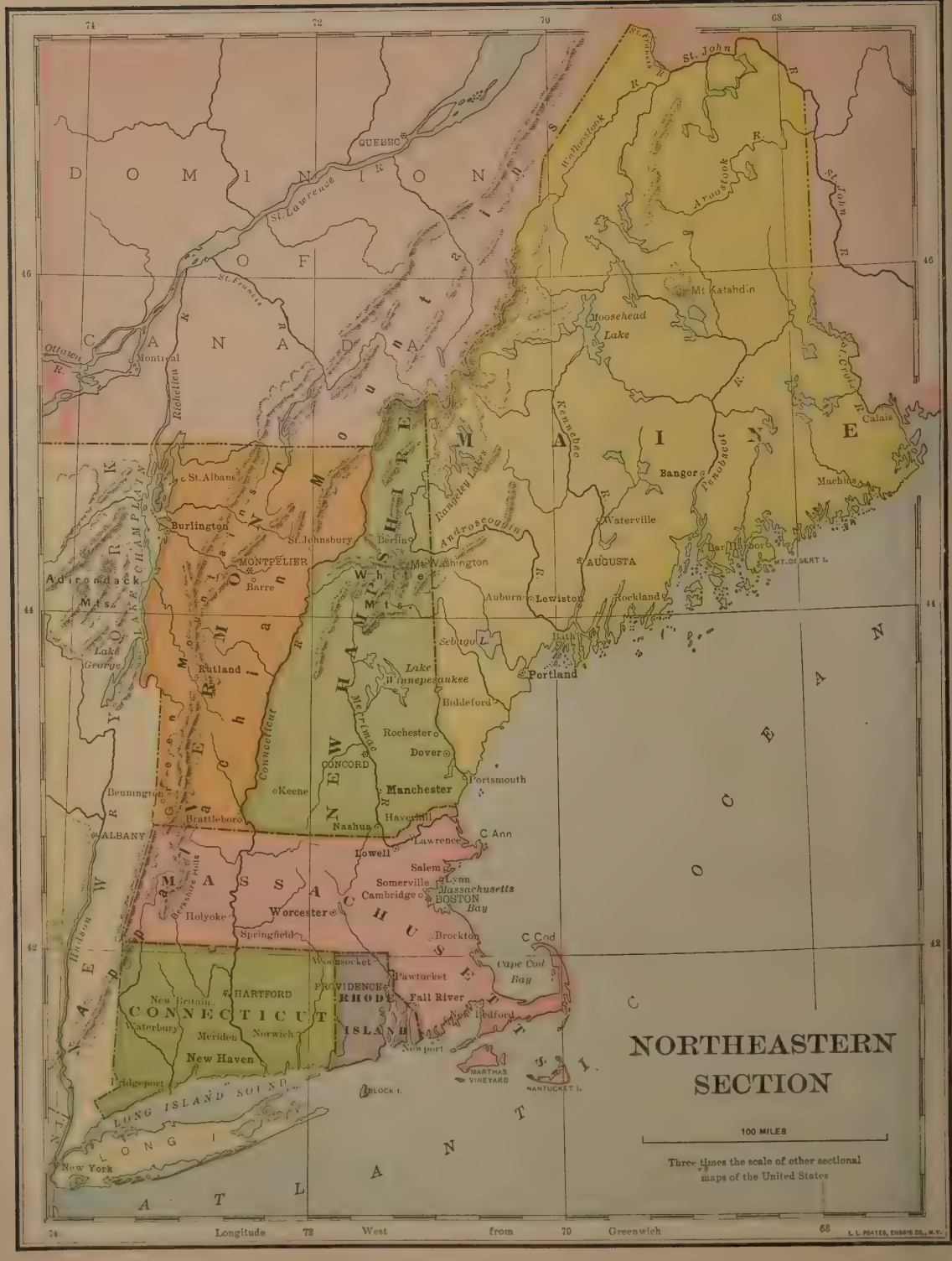
II. Great Manufacturing Region. East of the Appalachian Mountains. West of the Appalachian Mountains.

III. Commerce. Railroads. Ships.

This map shows the five industrial sections of our country. What are the chief products of each section? Make a list of the states in each section.






NORTHEASTERN SECTION
100 MILES
Three times the scale of other sectional maps of the United States
Longitude 74 72 70 68 West from Greenwich
L. L. POATES, ENGRG CO., N.Y.
DOMINION OF CANADA
QUEBEC
Montreal
Ottawa R.
St. Lawrence R.
St. Francis R.
Richelieu R.
St. John R.
Madawaska R.
Aroostook R.
Mt Katahdin
Moosehead Lake
Penobscot R.
Calais
Machias
Bangor
Kennebec R.
Androscoggin R.
Rangeley Lakes
Waterville
AUGUSTA
Bar Harbor
MT. DESERT I.
Rockland
Lewiston
Auburn
Bath
Sebago L.
Portland
Biddeford
Portsmouth
Dover
Rochester
Lake Winnepesaukee
Merrimac R.
Connecticut R.
CONCORD
Manchester
Keene
Nashua
Haverhill
Lawrence
C Ann
Lowell
Salem
Lynn
Somerville
Cambridge
BOSTON
Massachusetts Bay
Worcester
Holyoke
Springfield
Brockton
C Cod
Cape Cod Bay
Woonsocket
Pawtucket
PROVIDENCE
RHODE ISLAND
Fall River
New Bedford
Newport
MARTHAS VINEYARD
NANTUCKET I.
BLOCK I.
HARTFORD
New Britain
CONNECTICUT
Waterbury
Meriden
Norwich
New Haven
Bridgeport
LONG ISLAND SOUND
LONG I.
New York
ATLANTIC OCEAN
ALBANY
Troy
Hudson R.
Berkshire Hills
Brattleboro
Bennington
Burlington
St. Albans
St. Johnsbury
Barre
MONTPELIER
Berlin
Mt. Washington
White Mts.
Adirondack Mts.
Lake George
Rutland
Green Mts.
VERMONT
NEW HAMPSHIRE
MAINE
MASSACHUSETTS
NEW YORK

NORTHEASTERN SECTION

PHYSICAL FEATURES AND RESOURCES

Name the six states in the Northeastern Section of our country. Name and locate the capital of each. (The capitals are marked on the map thus *) Between and across what states does the Connecticut River flow? Into what water does it flow? Which state has no seacoast? What lake borders it? Which states are mountainous?

The Northeastern Section is often called New England. Each of the six states is much smaller than most of the other states in the Union. (See map, p. 37.) The map of this small section is therefore drawn on a larger scale than the maps of the other sections.

Lying far north, and near the ocean, New England has cool, moist summers, and cold winters with much ice and snow. The surface is hilly, and there are mountains in the west and northwest. In the valleys are hundreds of ponds and lakes. The streams are rapid and furnish abundant water power for turning machinery. The coast has many deep bays, with excellent harbors, and toward the northeast it is high, rocky, and fringed with rocky islands.

EAGLE LAKE, MAINE.

The White Mountains, the Green Mountains, the Berkshire Hills in western Massachusetts, the beautiful lakes, and the many seashore resorts of New England are visited every summer by thousands of people from all over the country.

GRANITE QUARRY, VERMONT.

Except in the northern part, where there are extensive forests, New England has many cities and towns, and is more densely peopled than any other part of the country. Massachusetts has about as many people and as much wealth as all the other states of the section together.

On the uplands of the section the soil is thin and stony. Most of the farming is done in the valleys and in the neighborhood of the cities, where the soil is carefully cultivated. Hay, vegetables, and apples are the chief crops, and are produced mostly in Massachusetts, Maine, and Vermont, the potato crop of northeastern Maine being noted. Some tobacco is raised in the lower Connecticut valley. Butter and cheese are produced in Vermont and Maine. But most of the food eaten in New England is brought from outside of the section.

Ice is gathered from the ponds of Maine for shipment to other states, and maple sugar is made in Vermont. Great quantities of codfish are caught by New England fishermen in the waters south of Newfoundland, and fish are sent all over the Union, and exported.

Much granite for building and for paving streets is quarried, chiefly in Massachusetts, Maine, and Vermont; and fine marble and slate are quarried in Vermont.

Spinning Yarn in a Cotton Mill.

TOPICS FOR ORAL OR WRITTEN WORK

I. Physical Features. Location. Surface. Climate.
II. States. Names. Most populous and richest.
III. Raw Products. Farm. Sea. Quarry. Others.

MANUFACTURES, COMMERCE, CITIES

Manufacturing and commerce are the industries upon which the wealth of New England depends, and are of far greater importance than all other industries in the section. The weaving of cotton and woolen cloth and the making of shoes are the most important manufacturing industries. Other noted manufactures are clothing, paper, rubber goods, jewelry, and all kinds of hardware, tools, and fine machinery.

Nearly all of the raw materials and fuel used in this manufacturing have to be brought great distances to New England. The cotton comes from the Southern states; the wool from the western highland and from Australia and South America; the rubber and hides from South America; and the coal, iron, and steel chiefly from Pennsylvania.

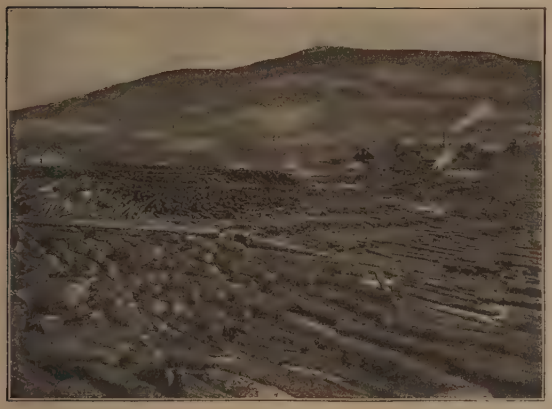
There are many cotton and woolen mills and great shoe factories in each of the six states of the section, but they are most numerous in Massachusetts.

Cotton is brought to the mills in bales. It is first cleaned, and then carded and combed into slender ropes of loose fiber. These are twisted and spun into yarn, which is then placed upon the looms, and the quick shuttle, darting from side to side, weaves it into cloth. Thousands of men, women, and girls are employed in the cotton factories. Among the many cities specially noted for cloth making are Fall River, New Bedford, Providence, Lowell, and Manchester. Find these cities on the map.

Thousands of workmen also are employed in the shoe factories of New England. They run the machines on which millions of pairs of shoes are made each year. In some towns the making of shoes is almost the only business carried on. The greatest centers in the

Plating Silver Ware.

Interior of a Shoe Factory.



LOGS AT THE SAWMILL.

United States for the manufacture of shoes are Brockton, Lynn, and Haverhill, in eastern Massachusetts. Find these places.

Paper is made from rags, or from wood reduced to a pulp by grinding it in water. Paper mills and sawmills are most numerous in western Massachusetts, and in Maine, New Hampshire, and Vermont, where there are forests. Holyoke, in Massachusetts, is the most noted paper-making center, and Bangor, in Maine, is a great lumber market. Find these places on the map.

BUNKER HILL MONUMENT.

The factories of rubber goods, jewelry, fire-arms, machinery, and hardware are chiefly in Massachusetts, Rhode Island, and Connecticut. Among the cities engaged in such manufacturing are Worcester, Springfield, Providence, New Haven, and Hartford. Find these cities. There are many other important manufacturing cities in the New England states.

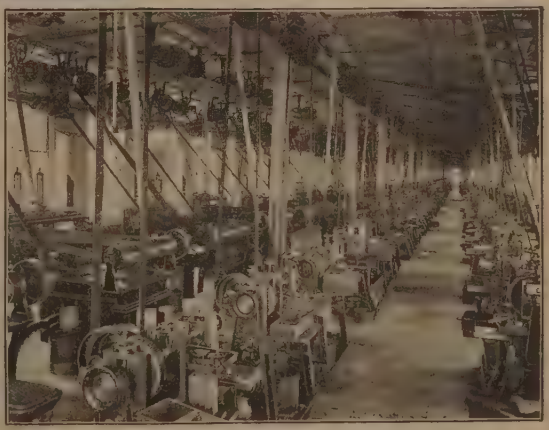
Boston is the largest and most important city in the section. In what state is it? It is a great seaport. It receives much of the raw material used in New England, and it ships much of the manufactured product. Railroads leading to Boston from all parts of New England, and from the West, bring to it the trade of nearly the entire section; and it is the greatest wool market in the whole United States. Much manufacturing of many kinds, but especially of machinery and of ready-made clothing, is done in the city.

Boston and the neighboring city of Cambridge have long been educational and literary centers, and in or near them many great authors, such as Longfellow, Lowell, Emerson, Holmes, and Hawthorne, lived and wrote. Bunker Hill, where one of the early battles of the Revolutionary War was fought, is now within the city of Boston.

Portland, the largest city and railroad center of Maine, and Providence, the second city of New England, are seaports with fine harbors. Worcester, Springfield, and New Haven are among the many important railroad centers.

TOPICS FOR ORAL OR WRITTEN WORK

I. MANUFACTURES. Cloth. Shoes. Others.
II. CITIES. Boston. Other commercial centers.



A GUN FACTORY, MASSACHUSETTS.

NORTHERN SECTION

PHYSICAL FEATURES

What mountain system crosses the eastern part of the Northern Section? What great river flows southward near the central part? Name the seven states west of the Mississippi River; the six states nearest the Mississippi on the east; the seven states nearest the Atlantic coast. Write a list of the states in each group, with the capital of each state.

What three bays are on the east coast? What five large lakes are in the north? What is the largest eastern tributary of the Mississippi River? the largest western tributary? Can you find any state in the section that is not bordered or crossed by one or more of these rivers, lakes, or bays?

The Northern Section extends westward from New England and the Atlantic Ocean halfway to the Pacific Ocean. The section is very large. It includes twenty states, and covers about one third of our country. The single state of Missouri is larger than the whole of New England.

The greater part of the section is lowland, with a smooth, gently sloping surface. Almost the only slopes too steep for farming are in the Appalachian Mountains, but even among those mountains there are many wide and fertile valleys. The seven eastern states are called the Middle States because this group lies near the middle of our Atlantic coast.

West of the mountains the surface slopes very gently down to the Great Lakes and the Mississippi River. There are few steep slopes, except along the streams, and nearly everywhere the soil is deep and fertile. The six states in this region are called the East Central States.

Westward from the Mississippi River the surface slopes gradually upward, and the extreme western part of the section lies on the Great Plains of the Rocky Mountain highland. The seven states of this region are called the West Central States.

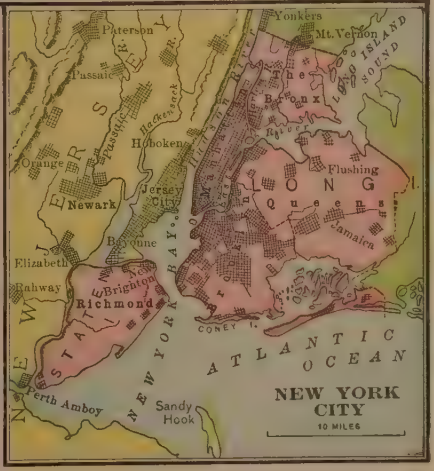
The winters throughout the Northern Section bring ice and snow, but the summers are long and hot. There is ample rainfall for farming, except in the extreme west. Thus the climate, surface, and soil of the section are suitable for farming, which is the most important industry. It is one of the greatest food-producing regions of the world. This section contains more people than all the rest of the United States.

CROPS

The principal crops of the Northern Section are grain, hay, vegetables, fruit, and tobacco.

Certain grasses, cultivated chiefly for their seeds, are called *grains*. Wheat, corn, and oats are the most important grains of this section. What are the chief uses of the grains? (p. 38.)

After the land is plowed, the seed grain is usually planted with machines called *drills*. The wheat and oats grow up as slender green stalks about three feet high, each with a cluster of seeds at the top. The corn plant is much larger. The stalk is thicker and it grows higher than a man's head. At the top is a beautiful



HARVESTING OATS.

yellowish tassel, while the ears of corn and long green leaves grow from the sides of the stalk lower down.

When the wheat and oats ripen, in summer, the plants turn yellow, and the farmers are then busy in gathering or harvesting their crops. Wheat and oats are cut by reaping machines, and the grain is separated from the straw and chaff by thrashing machines. Corn is generally harvested by hand, in the autumn.

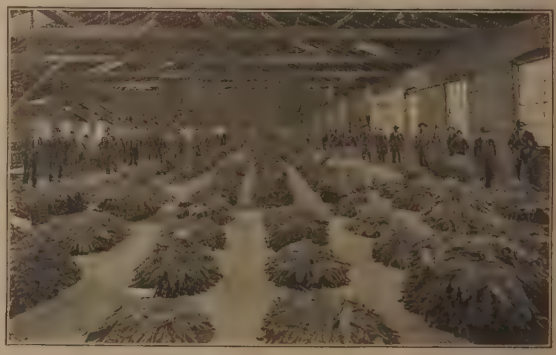
Large crops of grain are raised in all parts of the section, but particularly west of the Appalachian Mountains. Illinois, Iowa, Missouri, Kansas, and Nebraska are great corn-growing states. Minnesota, the Dakotas, Ohio, and Indiana produce large crops of wheat (map, p. 38).

GATHERING APPLES.

Many grasses have much smaller seeds than the grains, but their tender stalks, when dried into *hay*, form a valuable food for animals. The hay crop throughout this section is very heavy. It is especially large in New York and Pennsylvania.

Vegetables and fruits supply more food for man than any other crop of the section, except grain. Potatoes are the chief vegetable. They are *tubers*, or parts of the underground stems of the potato plant. Apples and berries are the chief fruits of the section.

Fruit and vegetables are grown in all parts of the section. The crops are largest in the east, where the many large cities afford a ready market. For such small states, Delaware, New Jersey, and Maryland produce very large crops of vegetables and fruit.



TOBACCO SALES ROOM.

Tobacco, the largest crop of the section not used for food, is produced in very large quantities in Kentucky and Virginia. On the map, p. 47, find Louisville in Kentucky, and Richmond in Virginia. These cities are great tobacco markets. Cigars and chewing tobacco are made there and in many other cities.

TOPICS FOR ORAL OR WRITTEN WORK

I. GRAINS. Define. Chief kinds. Uses. Where grown.
II. HAY. Define. Use. Where largely grown.
III. VEGETABLES AND FRUIT. Kinds. Where grown.
IV. TOBACCO. Where largely grown. Markets.

A Flock of Lambs.

ANIMAL PRODUCTS

In the Northern Section, where so much food for animals is grown, vast numbers of cattle, hogs, and horses are raised. The cattle and hogs are raised chiefly for their flesh, which is converted into beef or pork, to be eaten by man. So many animals are killed every year that this section supplies all parts of the United States with meat, and much is exported to foreign countries.

Many thousands of cattle are raised and kept to give milk. Most of the dairy products (milk, butter, and cheese) of the country come from this section.

Animals are raised in all parts of the section, but mostly in the western part. The great corn-growing states raise the most cattle and hogs for making meat. But New York and Pennsylvania, which have the largest hay crop, raise the most dairy cattle, and with Wisconsin and Iowa have the most cheese and butter factories.

Many million chickens are raised for their flesh and their eggs, and great flocks of sheep for their flesh and their wool. These animals are most numerous in the East Central States, Ohio and Michigan being noted for the production of sheep and wool.

Along the Atlantic coast thousands of men make their living by catching and selling fish, oysters, clams, and crabs. The most valuable of these are oysters. They are gathered in all the bays, but chiefly in Chesapeake Bay by the oystermen of Virginia and Maryland.

The oyster comes from a tiny egg, and floats about in the water until it grows to the size of a small pea. Then it fastens itself to some hard object on the bottom, and its shell begins to grow. After oysters grow for four or five years they are large enough for the market, and are gathered with long-handled tongs worked from boats floating on the water above the oyster beds.

TOPICS FOR ORAL OR WRITTEN WORK

I. Chief Animals. Uses. Where raised.
II. Sheep and Poultry. Uses. Where raised.
III. Fisheries. Fish. Oysters. Where obtained.

LUMBER AND MINERALS

Most lumber comes from evergreen trees — pine, spruce, and hemlock. This kind of lumber is called soft wood, and is much used in building. The oak, maple, elm, and ash are

A Dairy Farm.

INTERIOR OF A SAWMILL.

called hard-wood trees. Their wood is used for woodwork which requires strength or toughness, such as furniture, carriages, and flooring.

The forests of the Northern Section supply most of the lumber used in the United States. Great pine forests cover the northern part of Michigan, Wisconsin, and Minnesota, and south of the pine forests there is much valuable hard wood. From the forests of these states come most of the saw logs of the section. There are also large forests of both soft and hard woods along the Appalachian Mountains. Pennsylvania and Virginia supply the most logs from this region.

In sawmills the logs are sawed into rough lumber. This is sent to all parts of the country to be used in building, or to be made smooth in planing mills and manufactured into the many articles made of wood.

In New York, Pennsylvania, and Wisconsin forest trees are ground into wood pulp and made into paper.

The United States produces more coal than any other country in the world, and most of it comes from this section. The map (p. 39) shows that there are coal regions in fifteen states of this section. Coal is mined in each of these states. Make a list of them, beginning in the east. Most of it is mined in Pennsylvania, which supplies nearly half the coal mined in the United States. Much is also mined in Illinois, West Virginia, and Ohio.

Our greatest mines of iron ore are in the Mesaba range in Minnesota, and much iron ore and copper ore are mined in northern Michigan. In Minnesota the iron ore lies near the surface of the ground, and is so soft that it is dug up with steam shovels.

The metal iron is obtained by melting the ore in tall smelters, or blast furnaces. This needs a very hot fire. A hot fire is needed also to change the iron into steel. Coal or often coke, made by roasting coal in ovens, is the best fuel for making iron and steel.

No coal is found near the great iron mines of Minnesota and Michigan. So the ore is loaded on boats at various harbors on Lake Superior, and carried to ports on the other lakes nearer the coal fields. Some of this ore is smelted at Chicago, and much of it is smelted at Cleveland and near-by ports on Lake Erie; but most of it is sent on by railroad from Lake Erie to be smelted in the

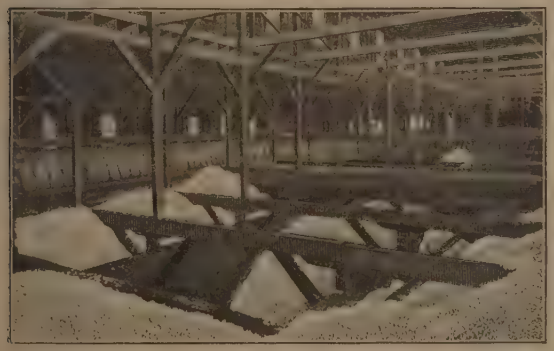
MINING IRON ORE WITH A STEAM SHOVEL.

BLAST FURNACES.

coal fields of Pennsylvania, near Pittsburg. Find these three cities — Chicago, Cleveland, and Pittsburg — on the map (p. 47).

Much petroleum and natural gas are obtained from the oil and gas wells in this section, mostly in Ohio, West Virginia, Pennsylvania, and Indiana. The petroleum is conveyed by pipe lines to refineries near Cleveland, Philadelphia, and New York. The natural gas is conveyed in pipes to Toledo, Detroit, Pittsburg, Indianapolis, and other cities, where it is used for fuel. Find these cities.

In New York there are salt mines and salt wells south of Rochester, and salt springs at Syracuse. In Michigan there are salt wells near Saginaw. Most of the salt used in the United States comes from these places. Find these cities.



SALT WORKS IN NEW YORK.

TOPICS FOR ORAL OR WRITTEN WORK

I. FORESTS. Kinds. Location. Lumbering states.
II. COAL. Comparative amount. Where mined.
III. IRON ORE. Where mined. Where smelted. Why?
IV. PETROLEUM AND GAS. Where obtained. How handled. Where used.
V. SALT. Where obtained. Where used.

MANUFACTURING AND COMMERCE

Manufacturing is done in all parts of the section, but chiefly in the eastern and central parts. It is particularly important in New York, New Jersey, Pennsylvania, Illinois, and Ohio, where the towns are closest together. (See map, p. 41.)

On the map, p. 47, find New York city, Chicago, and Philadelphia. They are by far the greatest manufacturing centers of the country. St. Louis, Pittsburg, Baltimore, Cincinnati, Cleveland, Newark (N.J.), Milwaukee, and Buffalo are other important manufacturing centers. Where is each of these cities? (See map, p. 47.)

PORK READY FOR SHIPMENT.

The most important manufactures are *meat*, *flour*, *iron* and *steel*, and *lumber*, and things made of iron, steel, and wood. All of these things are made from raw materials produced in the section.

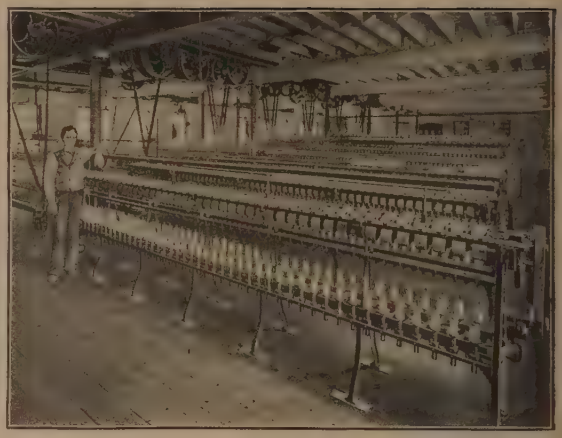
The chief centers for killing cattle and hogs and packing meat are Chicago, Kansas City

(Kans.), Omaha (Neb.), and Indianapolis. These cities are in the corn region, where food to fatten the animals is plentiful. When the animals are killed, all parts are used; the fat is made into oleomargarine or lard, the hides are tanned into leather, and even the horns, hoofs, and bristles are used.

Flour is made usually by crushing the grains of wheat between steel rollers turned by machinery. Minneapolis, in the wheat region, is the great flour-milling center. But much flour is made also in Milwaukee, Toledo, and many other cities.

As we have seen (p. 51), Pittsburg is the great iron- and steel-making center, but these metals are made also in Chicago, Cleveland, and Youngstown (Ohio). Machinery, rails, beams, and other steel articles are made at these and many other cities. Steamships for the lake trade are made at Cleveland.

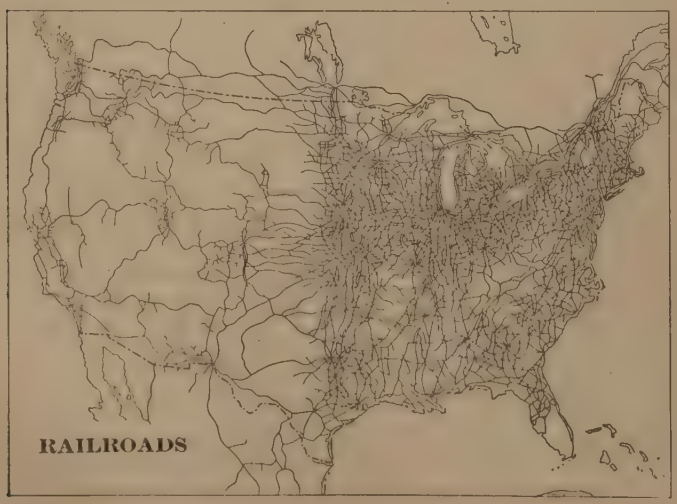
Most of the sawmills are in the great forest regions. Much lumber is sawed in Minneapolis, Duluth (Minn.), and Williamsport (Pa.). Nearly every city in the section has planing mills and manufactories of wooden articles. Much furniture is made at Grand Rapids (Mich.), and farming machinery at Chicago, and at Springfield in Ohio.



INTERIOR OF A SILK MILL, PATERSON.

The densely peopled coast plain near the good harbors of New York city, Philadelphia, and Baltimore, is a very important manufacturing region. In this region kerosene is refined from petroleum for shipment to all parts of the world; white sugar is made from raw sugar received from the West Indies; leather is tanned in Philadelphia, Newark, and Wilmington (Del.); carpets and other woolen goods are woven in Philadelphia, and silk in Paterson (N.J.), largely from imported raw material. Engines and machinery of all kinds are made throughout this region, and ocean steamships in Philadelphia and Baltimore. New York city, Chicago, Philadelphia, and Baltimore are all great centers for the making of clothing and the publishing of books and newspapers.

To aid the vast commerce in all these and many other manufactures, a network of railroads connects the cities of the section, as is shown on this map. But as it is cheaper to carry freight by boat than by railroad, much heavy freight is sent on the Great Lakes, the Mississippi River and its branches, and on the Atlantic Ocean.



LOWER END OF MANHATTAN ISLAND, NEW YORK CITY.

The Erie Canal and the Hudson River form a water route of great value, by which canal boats may pass from Lake Erie at Buffalo to the ocean at New York city. Another important but much shorter canal has been dug around the rapids, or *sault* (soo), in St. Marys River between Lake Superior and Lake Huron; and to avoid Niagara Falls, the Welland Canal through Canada connects Lake Erie and Lake Ontario. By using one or both of these shorter canals, boat loads of wheat have passed from Chicago or Duluth through Lake Ontario and the St. Lawrence River to Europe.

TOPICS FOR ORAL OR WRITTEN WORK

I. MANUFACTURING. States. Cities.

II. WEST OF MOUNTAINS. Chief kinds of manufactures. Great centers: of meat packing, flour milling, iron and steel products, wood products. Other manufactures. Source of raw materials.

III. NEAR THE GREAT SEAPORTS. Chief kinds. Great centers of each. Sources of raw materials.

IV. AIDS TO COMMERCE. Railroads. Natural water routes. Canals.

GREAT CITIES

Near the Atlantic Coast. — New York, our largest city, ranks second in the world in population. It lies on the mainland and on several islands at the mouth of the Hudson River. (See corner map, p. 47.) It has a fine harbor, and is reached so cheaply from the interior through the Hudson-Mohawk valley and other water gaps in the Appalachian Mountains, that its commerce greatly exceeds that of any other city in the United States. It is the main gateway of the country for both freight and travelers. The chief exports are meat, machinery, kerosene, copper, grain, and flour; while foreign manufactures and raw materials are imported. The chief manufactures of the city are clothing, white sugar, and books and newspapers. New York is the chief money-lending center in the country.

Philadelphia, on Delaware River, is our third city in population. It is a great seaport, coal market, and manufacturing center. Carpets and woolen goods, locomotive engines,

THE CENTRAL PART OF PHILADELPHIA.

machinery and steamships, white sugar, and leather are made here, and much iron and steel in the neighborhood. Congress met in this city, in Independence Hall, during the Revolutionary War.

Baltimore, on Chesapeake Bay, ships much grain, meat, petroleum, and coal. The chief manufactures are clothing, tobacco, and canned vegetables, fruits, and oysters.

Washington is the capital of the nation, and our most beautiful city.

On the Great Lakes. — Chicago, near the head of Lake Michigan, is in the heart of the grain region and near the Illinois coal field. It is so cheaply reached by the lake, and by railroads which center here from every direction, that it has grown rapidly, and is our second city in size and importance. It is the greatest meat-packing center in the world, the greatest grain market and shipping point, and one of the greatest lumber markets and manufacturing centers. It is a great center also for the manufacture of iron and steel, machinery, and clothing.

Milwaukee is a grain and lumber market. Iron, steel, and machinery, beer, leather, and flour are manufactured.

Detroit has a large commerce, and manufactures iron goods, tobacco, and drugs.

Cleveland, the largest city of Ohio, is a great receiving point for iron ore and lumber. Its chief manufactures are iron and steel, machinery, ships, kerosene, and packed meats.

Buffalo is a great railway center and the western terminus of the Erie Canal. It has a vast commerce in grain, flour, live stock, and lumber going eastward, and ships much coal westward. Its chief manufactures are packed meats, machinery, and linseed oil.

On the Mississippi and Ohio Rivers. — St. Louis, the fourth of our great cities in size, is the largest city in the Mississippi valley. Through the Mississippi, Missouri, and Ohio rivers, and many railroads, it can be easily

THE HEART OF CHICAGO.

reached from all quarters of the valley. It is a great commercial city, and is the trading center of the southwest part of our country. Its chief manufactures are tobacco, meat, beer, and machinery.

Pittsburg, including Allegheny, forms a large center of population. Because of the abundance of coal, petroleum, and natural gas, it has become the greatest iron- and steel-manufacturing center of the country. Much glass and coke are made. Much coal is shipped down the Ohio.

Cincinnati manufactures clothing, machinery, and liquors.

BRIDGE OVER THE MISSISSIPPI AT ST. LOUIS.

Louisville, at the rapids of the Ohio River, is a great tobacco market.

Minneapolis, at St. Anthonys Falls, and St. Paul, at the head of navigation on the Mississippi, form a single great center of population. Minneapolis is the greatest flour- and lumber-milling center in the world.

TOPICS FOR ORAL OR WRITTEN WORK

I. CITIES OF THE MIDDLE STATES. New York. Philadelphia. Other cities.

II. CITIES OF THE EAST CENTRAL STATES. Chicago. Other cities.

III. CITIES OF THE WEST CENTRAL STATES. St. Louis. Other cities.

SOUTHERN SECTION

SURFACE AND PEOPLE

Which states of this section border on the Atlantic? Which border on the Gulf of Mexico? Which have no seacoast? What mountains are in the extreme west? What mountains are in the eastern part? What great river crosses the central part? What states does it border? Name several other rivers which flow to the Gulf; several which flow to the Atlantic; two which flow to the Ohio. Name and locate the capital of each state.

This section extends across the southern part of our country from the Atlantic to the Rocky Mountains. It is smaller than the Northern Section, but it covers about one fourth of the United States and includes eleven states. One of these, Texas, is four times as large as New England. It is the largest state in the Union.

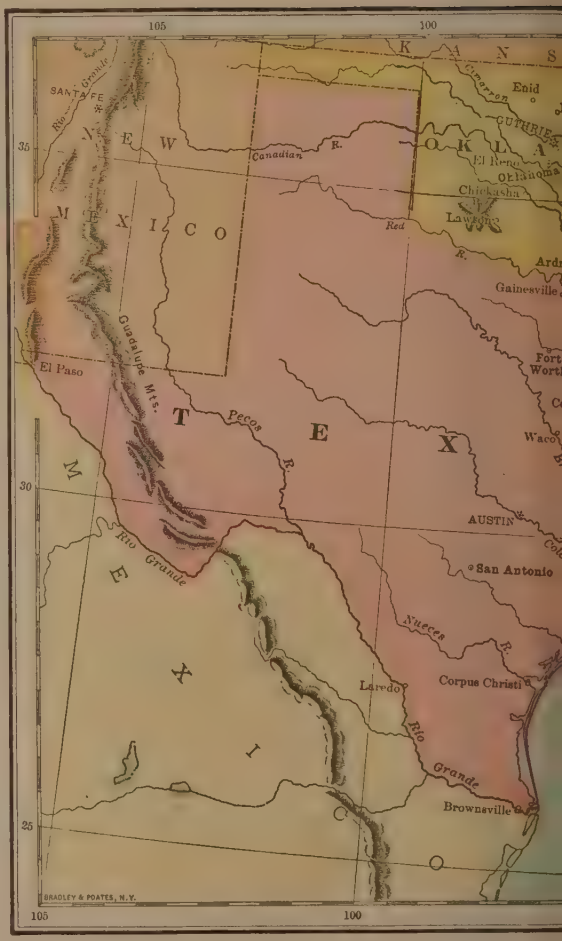
The highest part of the section is the Guadalupe range of the Rocky Mountains, in the extreme west. East of this the high, smooth surface of the Great Plains (p. 32) slopes gently down to the wide lowlands of the Gulf coast and the Mississippi valley.

East of the Mississippi River the surface is mostly a smooth lowland plain, but it is broken in the north by the Appalachian Mountains. From these mountains rivers flow across the plain, northwest to the Ohio, southwest to the Gulf, and southeast to the Atlantic.

The soil is generally fertile, but the coast region is sandy, with many swamps, particularly in the low peninsula of Florida. The coast is fringed with shallow salt-water *lagoons* or *sounds*, which are separated from the ocean by low, sandy islands.

The Mississippi flows through the section in a wide flood plain (p. 27). This is very fertile, but contains many swamps and is sometimes overflowed by the river. Much of the southern part of Louisiana lies in the great delta (p. 27) which this river has built out into the Gulf.

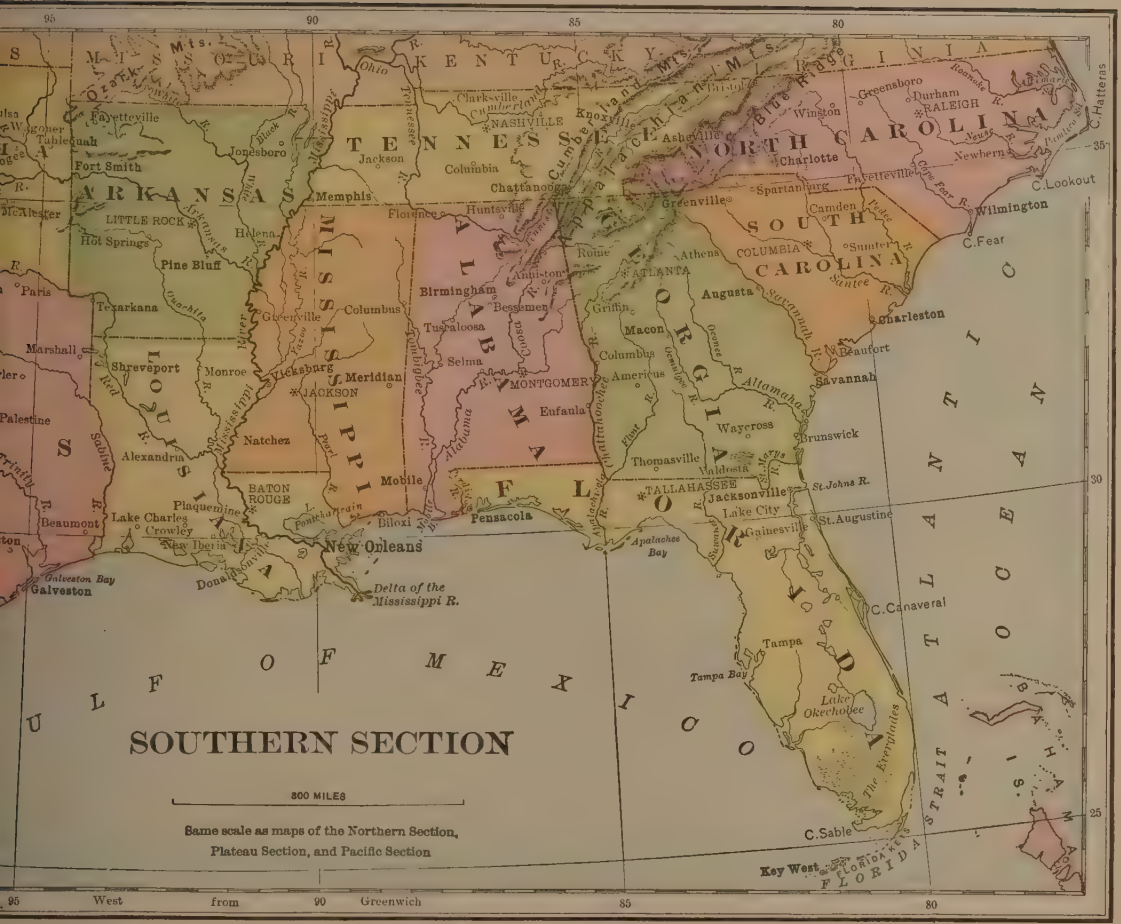
The summers are long, and the winters are so mild that snow seldom lies on the ground.



There is ample rainfall for agriculture, except on the Great Plains of the west.

Nearly one fourth of the people of the United States live in this section, and most of them are engaged in farming. It was once believed that white men could not work in the fields in such a warm climate, and so thousands of negroes were brought to this section from Africa, to do this work. About one third of the people now are negroes, and they do much of the work on the farms. In some of the states there are about as many negroes as white people.

In Oklahoma there are more Indians than in any other state or territory in the Union. Many of them are farmers.



TOPICS FOR ORAL OR WRITTEN WORK

I. LOCATION. Extent of Southern Section. States included.

II. SURFACE. Highland. Lowland. Mountains. Slopes. Chief rivers. Coast.

III. CLIMATE. Heat. Rainfall.

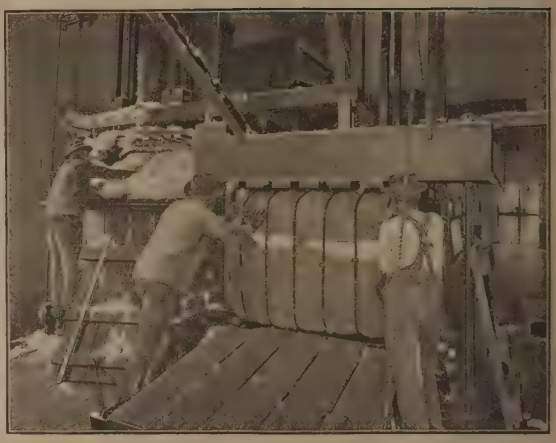
IV. PEOPLE. Number. Industries. Negroes. Indians.

FARM AND FOREST PRODUCTS

For what is cotton used? (p. 38.) Cotton is by far the most valuable product of the section. About three times as much is grown there as in all the rest of the world. It is grown in every state of the section. The crop is largest in eastern Texas, but it is also very large in Georgia, Mississippi, Alabama, and South Carolina.

Cotton is the woolly hair, or lint, that grows around the seed of a plant about three or four feet high. When the seed pods, or bolls, ripen, they burst and the fluffy cotton hangs from them in white balls. The cotton is generally picked by hand. The gathering usually begins in August and continues through the fall. The lint, or fiber, is separated from the seeds by a machine called a *gin*, and the cotton is then pressed and bound in bales ready for shipment. From the seeds of the plant is made a fine quality of oil, which is often used in place of olive oil. The *cake*, or substance

PICKING COTTON.



BALING COTTON.

that remains after the oil is pressed out of the seeds, is used as a food for cattle and as a *fertilizer* to enrich the soil.

Other crops are corn and vegetables and fruit in all the states; wheat in Texas, Oklahoma, and Tennessee; and tobacco, chiefly in North Carolina; but all these crops are comparatively small. The sweet potato is the chief vegetable of the South. In the northern part of the section many peaches and strawberries are raised for the Northern market, many watermelons in Georgia, and many oranges and lemons in Florida.

In Louisiana the most important crop, after cotton, is sugar cane. It is grown in the rich soil of the Mississippi delta. Sugar cane looks much like the corn plant, but is somewhat larger. The crop is gathered by cutting the stalks close to the ground. These are sent to the sugar mills, where their sweet juice is pressed out between heavy rollers. The juice is boiled until it forms brown sugar and molasses. The brown or raw sugar is then refined into white sugar.

CUTTING SUGAR CANE.

In the low regions of Louisiana and South Carolina, rice also is raised. Rice is a kind of grain something like wheat, but generally it grows in fields which can be flooded with water after the seed is planted. The grain is separated from the straw by thrashing, but must then be sent to the rice mills, where the hulls are removed and the grain polished before it is ready for market.

Many cattle are raised on the dry, grassy plains of Texas and Oklahoma, and are sent north to be fattened and made into beef. More mules are raised and used in this section than in all the rest of the Union.

The dry western part of the section is almost treeless, but in the central and eastern parts are extensive forests. In the hilly regions of Arkansas, Tennessee, and North Carolina are valuable hard-wood forests; but in the sandy coast

plain the forests are mostly tall and stately trees of southern or yellow pine, which supply valuable building timber, used especially for flooring. From the sap of these pines much turpentine and rosin are made. In the swamps are dense canebrakes and valuable cypress trees, and in the forests of the far

GATHERING PINE SAP, GEORGIA.

South are great evergreen oaks, palmettoes, and flowering magnolias, which in the Northern states are seen only in greenhouses. The forests of this section supply about one fourth of the lumber cut in the United States.

TOPICS FOR ORAL OR WRITTEN WORK

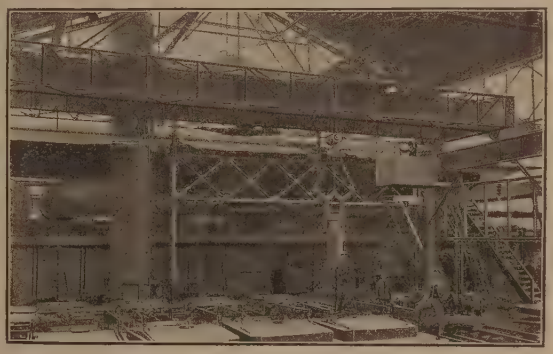
I. COTTON, SUGAR CANE, AND RICE. Describe each. Importance of each.
II. OTHER CROPS. Corn, vegetables, and fruit. Wheat. Tobacco. Where each is grown.
III. ANIMALS. Cattle. Mules.
IV. FORESTS. Hard-wood. Soft-wood. Other trees.

MINING, MANUFACTURING, CITIES

Mining and manufacturing are less important in this section than in the Northern states.

Coal and iron are mined in large quantities near Birmingham, in Alabama, and also near Chattanooga, in Tennessee, and these places are noted centers for the making of iron and steel and metal articles. Coal is mined also in Oklahoma and Arkansas, near Fort Smith. Much petroleum is obtained in southeastern Texas and southwestern Louisiana. Marble is quarried in the mountains of Georgia and Tennessee; and phosphate rock, which makes fine fertilizer, is exported from Florida, Tennessee, and South Carolina.

The sawing of lumber and the making of cotton cloth are the most important manufacturing industries. Lumber is manufactured in all the states, especially in Louisiana, Arkansas, and Mississippi. The manufacture of cotton cloth is increasing rapidly in the South.



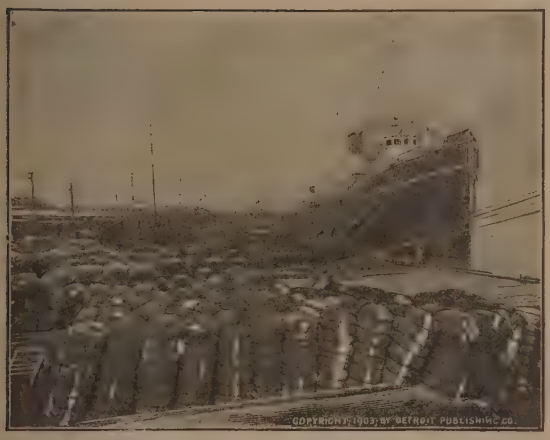
INTERIOR OF A STEEL MILL, ALABAMA.

It is the leading industry in the Carolinas and Georgia. Charlotte, Columbia, Augusta, Macon, and Atlanta are among the many cotton-manufacturing centers in these states.

Other important manufactures of the section are sugar, made mostly in Louisiana; cottonseed oil, made in all the states, especially in Texas; flour, made chiefly in Tennessee and Texas; iron, steel, and foundry products, which come mostly from Alabama and Tennessee; turpentine and rosin, chiefly from Florida and Georgia; smoking tobacco, from North Carolina; and cigars, made from Cuban tobacco, at Key West and Tampa, in Florida.

As less manufacturing is done, there are fewer cities and towns in the Southern Section than in the Northern Section and New

PLATEAU SECTION
300 MILES
Same scale as maps of the Northern Section,
Southern Section, and Pacific Section
Longitude West from Greenwich
120
115
110
105
100
DOMINION OF CANADA
NORTH DAKOTA
SOUTH DAKOTA
MONTANA
WASHINGTON
OREGON
IDAHO
WYOMING
NEBRASKA
NEVADA
UTAH
COLORADO
ARIZONA
NEW MEXICO
OKLAHOMA
CALIFORNIA
Great Falls
Missouri R.
Columbia R.
Snake R.
Yellowstone R.
Platte R.
Arkansas R.
Colorado R.
Rio Grande
Pecos R.
Canadian R.
Gila R.
Colorado R. of the West
Wallace
Moscow
Lewiston
Anaconda
HELENA
Butte
Bozeman
Billings
Livingston
Sheridan
Weiser
BOISE
Idaho Falls
Pocatello
Fremont Peak
Rawlins
Green River
Rock Springs
Laramie
CHEYENNE
Newcastle
Belle Fourche
BISMARCK
PIERRE
Winnemucca
Elko
Ogden
Box Elder
Logan
Great Salt Lake
SALT LAKE CITY
Uinta Mts.
Reno
Wadsworth
Virginia City
CARSON CITY
Eureka
Grand Junction
Boulder
DENVER
Leadville
Colorado Springs
Cripple Creek
Canon City
Pueblo
Florence
Trinidad
Raton
Las Vegas
SANTA FE
Gallup
Albuquerque
Roswell
Jerome
Prescott
PHŒNIX
Globe
Florence
Yuma
Tucson
Silver City
El Paso
Nogales
Bisbee
LOWER CALIFORNIA
GULF OF CALIFORNIA
PACIFIC OCEAN
MEXICO



SHIPPING COTTON, NEW ORLEANS LEVEE.

England. The largest cities in the South are small as compared with the largest cities in the North, and they are centers of commerce rather than of manufacture.

New Orleans is much the largest city of the South. It is a great river port on the Mississippi, and is also an important seaport, for ocean steamers ascend the river to its wharves. It is a great shipping point for cotton and for grain brought down the river. Much sugar is made and refined in New Orleans. The French language is still spoken by many of the citizens, who are descendants of the French people who first settled the city about two hundred years ago.

Where are Atlanta, Memphis, and Nashville? They are the largest cities of the section, after New Orleans. Which are river ports? They are all great railroad centers, and Atlanta is called the Gate City of the South on this account. Atlanta manufactures much cotton, Nashville much flour, and Memphis much lumber and cottonseed oil.

Where are Savannah, Charleston, Mobile, and Galveston? They are important shipping points for raw cotton and lumber. Galveston ships as much cotton as New Orleans, and Savannah about half as much. San Antonio, Houston, and Dallas are the largest cities in the western part of the section. Hot Springs in Arkansas is a famous health resort.

TOPICS FOR ORAL OR WRITTEN WORK

I. MINING. Coal. Iron ore. Petroleum. Other.
II. MANUFACTURES. Lumber, states. Cloth, states and centers. Other manufactures.
III. CITIES. New Orleans. Other seaports. Other river ports. Other cities.

PLATEAU SECTION

Which part of the Plateau Section is crossed by the Rocky Mountains? In these mountains find Yellowstone Park. What great tributary of the Mississippi River has its source in this park? What river of the Pacific slope has its source near that of the Missouri? What tributary of the Mississippi has its source in central Colorado? What great river of the Pacific slope has its headwaters near the source of the Arkansas? What river flowing to the Gulf of Mexico rises in southern Colorado? Where are the territories of Arizona and New Mexico? Name the six states of the section. Name and locate the capital of each state and territory.

The Plateau Section lies on the Rocky Mountain highland and includes the wildest part of our Union. It is larger than the Southern Section, but contains only six states and the territories of New Mexico and Arizona. The whole section does not contain so many people as Massachusetts. Most of the people are whites, but there are many Indians. The Indians usually live in certain regions reserved for them by the government, and therefore called Indian Reservations.

HOUSES OF THE PUEBLO INDIANS.

In the east the smooth surface forms part of the Great Plains (p. 32) and lies on the Atlantic slope of America. The western part of the section lies on the Pacific slope. It is a rough highland crossed by many mountain ranges, lines of cliffs, and deep canyons. The canyon of the Colorado River is especially noted.

The central part of the section is crossed by the many ranges of the Rocky Mountains, and is the most rugged and mountainous part of our country. Yellowstone National Park,

GEYSERS IN YELLOWSTONE NATIONAL PARK.

in this section, is famous for its mountain scenery, its canyon, and its *geysers*, or hot springs which every little while spout hot water and steam high into the air. Hunting is not permitted in the Park, and so bears and other wild animals are very plentiful there.

The section is so high and its air is so pure and dry that the climate is healthful, but it is very cold in winter and very hot in summer, especially in the south. This is the driest part of the United States. Part of the Great Basin west of the Wasatch Mountains is a desert. Most of the section, however, has enough rain to support a growth of coarse grasses which make good pasturage. On the mountains so much snow falls in winter that it is not always melted away in summer. The melting snow supplies moisture to forests on the lower mountain slopes, and is the source of most of the streams of the section.

THE DESERT, ARIZONA.

Considerable hay, and some grain, vegetables, and fruit are raised, chiefly in Colorado, Idaho, Montana, and Utah. Farming, however, is not widely pursued, for in this dry section the crops must be watered, or *irrigated*. This is usually done by damming some stream and leading the water to the fields through canals and ditches.

A large part of the world's supply of copper, gold, silver, and lead comes from this section; and the production of these metals is by far the most important industry.

Most of the metal-bearing rock is found in the mountains. It occurs in comparatively thin layers extending down into the earth. Deep mines are sunk into these layers by blasting, and the rock is hoisted to the surface. It then goes to the reduction works,

INTERIOR OF A GOLD MINE, COLORADO.

MELTING GOLD AT THE ASSAY OFFICE, HELENA, MONT.

where it is crushed and washed, or smelted, or roasted, or treated with chemicals in order to obtain the metal. The same rock often contains more than one kind of metal.

Butte and Helena, in Montana, and Bisbee, in Arizona, are the greatest copper-mining centers; the most noted silver mines are at Leadville and the most noted gold mines at Cripple Creek, in Colorado; and Idaho and Utah produce the most lead. Each of these metals, however, is mined in every state and territory of the section. Coal is mined in Colorado and Wyoming, and some iron ore and petroleum are obtained in Colorado.

Herding also is an important industry. There are great herds of cattle and sheep in every state and territory of the section.

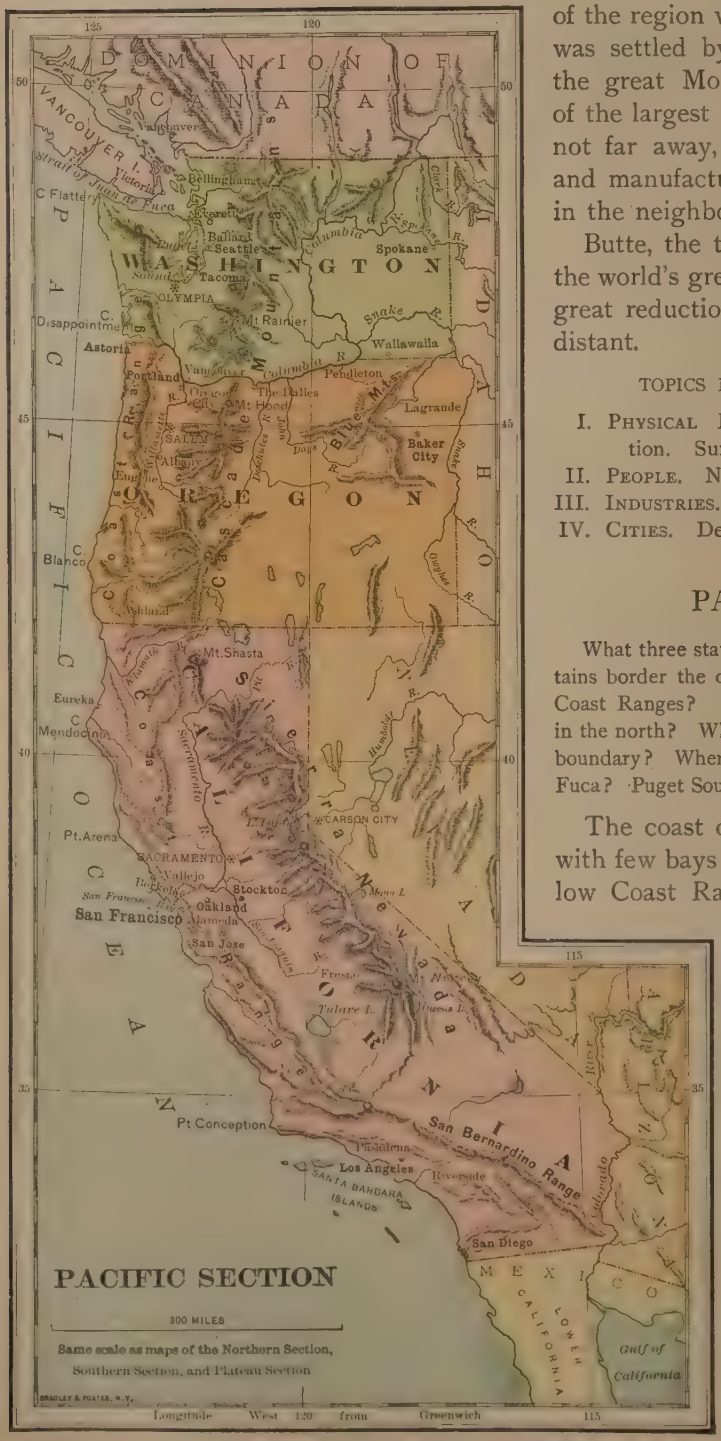
The greatest ranges for the cattle are east of the Rocky Mountains, on the Great Plains of Colorado, Montana, Wyoming, and New Mexico. Very little of the land is fenced, and the great herds roam from one part of the range to another. The grass dries into a kind of hay in the summer, but remains standing and forms good food through the winter. Twice a year the mounted "cowboys" collect the cattle in a "round-up"; the young cattle are branded with the owner's mark, and those of proper age are sent east to be fattened and converted into beef.

Sheep are most plentiful in Montana and Wyoming, but are also very numerous in New Mexico and Utah. Each herd is attended by "sheep men," with their shepherd dogs to keep the sheep together and protect them from coyotes, or prairie wolves. In summer the herds find fresh pasturage in the mountains, but in the winter they are driven out on the plateau, where there is less snow. The sheep men live in covered wagons furnished with stoves and sleeping bunks, where they can keep comfortable even in the winter; but they lead very lonely lives. Once and sometimes twice a year the sheep are sheared, and the great bags of wool are sent east to market. Thousands of sheep also are sent east to be fattened, killed, and converted into mutton. Cheyenne in Wyoming, and Great Falls and Billings in Montana, are great shipping points for wool and cattle.

Of the few cities in the section, Denver, the capital of Colorado, is by far the largest. It lies on the Great Plains, at the foot of the Rocky Mountains, but its elevation is just a mile above the ocean. It is the great commercial center of the section, and has large works for smelting ores. Not far away are Colorado Springs, a noted health resort, and Pueblo, an important manufacturing center, with smelters and iron and steel foundries.

Salt Lake City is the second city of the section. It is the commercial center for much

SHEEP HERDERS AND THEIR WAGON.



of the region west of the Rocky Mountains. It was settled by Mormons, a religious sect, and the great Mormon temple in this city is one of the largest buildings in the section. Ogden, not far away, is an important railroad center, and manufactures beet sugar from beets raised in the neighborhood.

Butte, the third city of the section, is one of the world's greatest copper-mining centers. The great reduction works are at Anaconda, not far distant.

TOPICS FOR ORAL OR WRITTEN WORK

I. PHYSICAL FEATURES. Location of the Plateau Section. Surface. Climate.
II. PEOPLE. Number. Races.
III. INDUSTRIES. Mining. Herding. Farming.
IV. CITIES. Denver. Salt Lake City. Butte.

PACIFIC SECTION

What three states are in the Pacific Section? What mountains border the coast? What great ranges are east of the Coast Ranges? What great river breaks through the ranges in the north? What great river forms part of the southeast boundary? Where is San Francisco Bay? Strait of Juan de Fuca? Puget Sound? What is the capital of each state?

The coast of this section is steep and rocky, with few bays or harbors. It is bordered by the low Coast Ranges. Farther east are the high and more rugged Sierra Nevada and Cascade Mountains. Their tops, in the north, are always covered with snow, and they contain much grand scenery. East of these high mountains the section lies chiefly in the dry plateau region, but west of them there are abundant winter rains. These are brought by ocean winds, which also prevent the winters from becoming very cold. The summers are dry and warm, particularly in the south.

More people live in this section than in the Plateau Section,

WHEAT HARVESTER AND THRASHER, WASHINGTON.

but it is very thinly settled in comparison with the eastern part of our country. Most of the people are whites from the Eastern states, but there are a few Indians, and more Chinese than in all the rest of the Union.

The great valleys between the high mountains and the Coast Ranges are noted farming regions. In the south, where there is less rainfall, water from the snow-fed mountain streams is led to the orchards and vineyards in irrigating ditches.

PICKING HOPS, WASHINGTON.

What two rivers drain the great valley in California? What one drains the valley in Oregon? Puget Sound lies in the valley in Washington.

The chief crops in this section are wheat and fruit. Hay, barley, and hops are produced in the great valleys, and sugar beets in the valleys of the Coast Range south of San Francisco Bay.

Wheat is raised in the great valleys in all the states, and also in eastern Washington in the Columbia valley.

Most of the fruit is grown in California, which is the greatest fruit-growing state in the Union. Among the fruits grown are grapes, peaches, pears, plums, and oranges. Much of this fruit is sent "fresh" in refrigerator cars to the Eastern markets, and much of it is canned or preserved. Most of the grapes are used to make wine or raisins.

Barley is a grain much like wheat; and hops are the flowers of the hop vine. Both barley and hops are used mainly in making beer. From the juice of the beets white sugar is made.

Many cattle and sheep are raised in this section, and much fine wool is produced The fisheries are very valuable. Every year salmon ascend the Columbia and other northern rivers to lay their eggs, and great numbers are caught in nets and weirs. When cooked and canned, they are sent to almost every city in the world to be eaten. Oysters, cod, and halibut are caught along the coast.

The heaviest forests of the country are in the northern part of this section. The trees are mostly soft-wood: fir in Washington and Oregon, and redwood in northwestern California. Lumbering is an important industry in these regions. Small groves of "Big Trees," a kind of redwood, are found on the west slope of the Sierra Nevada.

DRYING RAISINS, CALIFORNIA.

These trees are taller than a high church spire, and are among the largest in the world.

Sixty years ago very few white men lived in this section; but when gold was discovered in California, gold hunters hurried there from all parts of the world, so that San Francisco became a large city in a few months. The section is rich now because of its farms rather than because of its mines; but about one fourth of the gold mined in the United States still comes from this section, mostly from the northern half of California.

LUMBERING, WASHINGTON.

About one fourth of the petroleum collected in our country comes from the oil wells in southern California. It is used largely for fuel, although coal, mined in northern Washington and on Vancouver Island, is used also.

Manufacturing has not yet become a leading industry; yet the lumber mills about Puget Sound are the largest in the world; there are great salmon canneries along the Columbia; the making of wine, the preserving of fruit, and flour milling are extensive industries in California; and the making of sugar from home-grown beets is a growing industry.

What great city is on San Francisco Bay? San Francisco is one of the large cities of our country, and the largest city and greatest seaport on the Pacific coast of America. The

CANS OF SALMON READY FOR SHIPMENT.

harbor in the bay is one of the finest in the world. Its entrance is called the Golden Gate. Lines of steamships connect the city with South America, with New York, with Australia, and with Asia. Among the important manufactures of the city is the refining of the cane sugar grown on the Pacific islands. Many people doing business in San Francisco live in Oakland, on the east side of the bay.

Find Los Angeles. It is the chief market of the fruit and wine region of southern California. Where is Portland? Ocean steamships ascend the Columbia and Willamette rivers to its docks. Where is Seattle? It is the chief port on Puget Sound. Railways connect all of these cities with the East.

Turn to the map on p. 68. In what part of North America is Alaska? By what waters is it nearly surrounded? What strait separates it from Asia? By what great river is it crossed?

Alaska belongs to the United States. It is a great peninsula, and is twice as large as Texas.

Northern Alaska is very bleak and cold. The mountainous southern part is warmed by ocean winds; yet it is cold and moist enough for much snow to fall. Many of the high mountain valleys are nearly filled with snow. It becomes so deep that its lower part

is pressed into solid ice, which creeps slowly down the valley as a *glacier*, or river of ice. When glaciers descend into the sea, huge pieces break off and float away as *icebergs*.

Where is Mount McKinley? It is the highest peak in North America.

Very few people live in Alaska. Eskimos, a people thought by some to belong to the yellow race, are found in the north; but the natives of the southwest coast are Indians. Most of the few white men who live in Alaska are gold miners on the western and southern coasts and in the Yukon valley.

Where are the Pribilof Islands? Every summer, seals come from the Pacific Ocean to these islands. Many of them are killed here. The fur of these animals, gold, and codfish and salmon caught in great numbers along the coast, are the chief products of Alaska.

TOPICS FOR ORAL OR WRITTEN WORK

I. Pacific Section. States. Surface. Climate. People. Chief crops. Fisheries. Forests. Mining. Manufactures. Cities.

II. Alaska. Location. Size. Climate. Glaciers. People. Products.

MINOR COUNTRIES OF NORTH AMERICA

CANADA AND NEWFOUNDLAND

Look at the map on p. 29. In what part of Canada do most of the people live? Notice what circle crosses the northern part. In what zone is the northern part of Canada? (map, p. 18.)

The northern part of Canada is too cold for the growth of trees which men could use to make houses, or of vegetables and other plants which they could use for food. The ground is covered with snow for the greater part of the year, and snowstorms sometimes occur in summer. In the central part of Canada there are extensive forests, and the winters are not quite so long and cold as they are farther north. Except in a few mining settlements and trading posts, the only people living in these lonely and desolate regions are a few scattered families of Eskimos and Indians, who spend their time in hunting and fishing. They often find it difficult to keep from starving and freezing to death during the long winters.

A Group of Eskimos.

In winter the Eskimos live near the coast, where they can catch seals, walruses, and other sea animals. They live in low, dome-shaped huts built of stones and mud, or of blocks of ice and snow. Men, women, and children dress much alike, in clothing made out of heavy fur. During the short summer they move inland to hunt the reindeer, or caribou, which wander far north in great herds. The Eskimo eats the flesh of the reindeer, and makes his clothes, his summer tent, and his canoe of reindeer skin or seal skin.

The Indians live farther south than the Eskimos, in the region where there are forests. They make huts

of poles, over which they stretch the skins of animals and about which they pile brush and snow. They get their food by fishing and hunting, and trap the mink, marten, beaver, otter, and other small animals for their fur-covered skins. White men have trading houses in this region, where the Indians trade the furs for guns, blankets, and clothing.

There are few wagon roads in this wild country, but there are many rivers and lakes. In summer, Eskimos, Indians, and the white traders travel on these waters in canoes, which they carry from one lake or river to another. In winter, when the country is covered with snow and ice, all loads are carried on sledges drawn by dogs, while the men run alongside.

DOG TEAMS AND SLEDS, CANADA.

The men wear long snowshoes to prevent them from sinking into the deep snow.

In these ways the furs reach the settled region farther south, or the shores of Hudson Bay. Then they are sent to England to be made into muffs, capes, and other garments. These furs, and gold from the Klondike region in the extreme northwest, are about the only things of value sent from the cold, bleak, and lonely northern part of Canada.

In southern and southeastern Canada, where most of the people live, the winters are cold, but the summers are long and warm enough for grain, grass, and vegetables to ripen. Agriculture is the chief industry in this region.

Near the Pacific the climate is moist and mild, but the surface is mountainous, and little farming is done. There are extensive forests, and lumbering, coal mining, gold mining, and fishing are leading industries. Vancouver is the important city and seaport in this region.

Where are Lake Winnipeg and the Saskatchewan River? Much wheat for export is grown in the basin of this lake and river. What city is south of Lake Winnipeg? It is a market for farmers and fur traders.

Where are the St. Lawrence and Ottawa rivers? Find Lake Ontario and Lake Erie (map, p. 37). Grain, vegetables, apples, and hay are grown near these lakes, and in the St. Lawrence valley. Many dairy cattle are raised, and much cheese and butter is made for export.

North of the farming region are extensive forests, and lumbering and sawmilling are important industries. Find Ottawa and Quebec on the map. Both these cities are great lumber centers.

What peninsula is in the southeastern part of Canada? Here are valuable coal and iron mines, with extensive forests farther north. Find Halifax. It is the chief harbor and seaport of this part of Canada.

What large island is east of the Gulf of St. Lawrence? The shallow parts of the ocean just south of this island are called "the Banks of Newfoundland." They are the greatest fisheries in the world. Immense numbers of cod and other kinds of fish are caught there by fishermen from Newfoundland and southeastern Canada.

WASHING CODFISH, NEWFOUNDLAND.

Long ago the valley of the St. Lawrence belonged to the French, but just before our Revolutionary War it was taken by the English. Some of the people now are descendants of the early French settlers, and speak the French language.

Canada still belongs to England, but is permitted to govern itself almost entirely. The chief officer, however, is appointed by the English king, who also appoints the chief officer of Newfoundland.

Where is Montreal? It is the largest city and the greatest railroad center of Canada. Ocean steamships ascend the St. Lawrence to its wharves, and a long railroad extends west through Winnipeg to Vancouver on the Pacific coast. Toronto is the second city of Canada in size. Ottawa is the capital.

Sketch North America and mark off Canada.

TOPICS ON CANADA

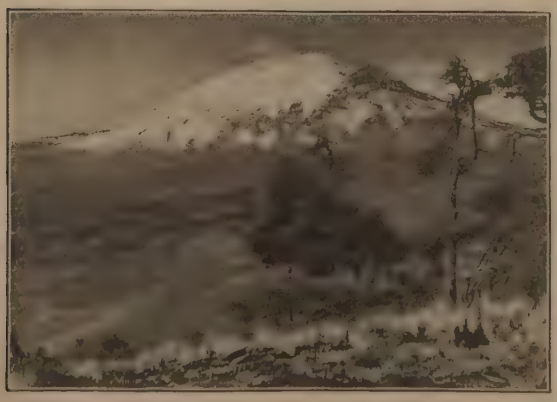
I. Location and Climate.
II. Industries. Farming regions. Lumber regions. Mining regions. Hunting regions. Fishing region.
III. People. English. French. Eskimos. Indians.
IV. Government.
V. Cities.

MEXICO AND CENTRAL AMERICA

Name the country south of the United States (map, p. 68). What waters are east of Mexico? west and southwest? What peninsula forms the western part of Mexico? the southeastern part? What river is between the United States and Mexico? What mountains are in Mexico? What part of America is southeast of Mexico?

North America narrows rapidly in Mexico, and in Central America it narrows to the Isthmus of Panama in the south.

The coasts of Mexico and Central America are narrow lowlands, but a little way from the shore the surface slopes steeply upward to a high plateau, or *table-land*. In Mexico this is part of the Rocky Mountain highland (map, p. 20). In what zones are these countries? The lowlands are hot, moist, and unhealthful. The highlands are not so hot, and in Mexico they are very dry.



A Volcano in Mexico.

Along the foot and side of the table-land is a region of tangled forest where monkeys and humming birds are found. In the forests are mahogany trees, vines bearing vanilla beans, and the sarsaparilla plant.

The table-land is bordered with mountain ranges, so high that many of the peaks are always snow-covered. At times some of them pour out clouds of steam and streams of white-hot melted rock, or *lava*. For months their tops may be hidden in clouds of steam, while at night the gleam of the hot lava is so bright that the mountains seem on fire. Such peaks

Loading Bananas, Central America.

are called *volcanoes;* each is a sort of chimney through which steam and other gases, formed within the earth, may escape.

Farming, cattle raising, and mining are the chief industries. In the warmer lower lands are groves of orange trees and bananas, and of tall, feathery palm trees; and cotton, sugar cane, coffee, and tobacco are grown.

Many of the plants of the table-land are like those which we see at home, for the weather, though usually rather dry, is much like that of

the temperate zone. In the forests are oak and cedar trees, while corn, wheat, and beans grow on the farms. One of the most useful plants is the *maguey*. This is the same as the "century plant" grown in gardens at home. From its sap a popular drink is prepared; its pulpy roots are used for food; and the fiber of one kind of maguey is used in making twine and coarse bagging. This is called *sisal hemp* in the lowlands of Yucatan, where it is extensively grown for export.

MAGUEY PLANTS, MEXICO.

The chief wealth of Mexico comes from the silver mines. They are in the highlands. The Spaniards who first settled the region soon began to mine gold and silver, and about one third of the silver mined in the world still comes from Mexico. Silver and silver ore are the chief exports, but copper also is mined and exported. Many cattle and sheep are raised on the table-land, and some hides are sent to the United States.

More Indians lived in Mexico and Central America than in the northern part of the grand division, and they were more nearly civilized. Many of the Spanish settlers married Indian women, and their children were half-breeds. Most of the people now are half-breeds and partly civilized Indians. The Spaniards and a few of the half-breeds own most of the land and are rich and powerful, but the Indians and most of the half-breeds are poor, ignorant, and wretched. They are the laborers on the farms and in the mines.

A GROUP OF THE COMMON PEOPLE IN MEXICO.

The people who work on the farms live in villages and towns. Their houses are often wretched hovels; a hole through the wall answers for a window, and the hard ground for a floor. The walls are built of straw, or of sun-dried brick called *adobe*, and the roofs are covered with tiles or with coarse grass.

Indian corn and beans are the food of most of the common people. The beans are cooked with red pepper pods. The corn is ground, often by hand between two pieces of stone, into a coarse meal. It is then made into a dough, and thin pieces are laid in a very hot clay oven to bake.

Like the English colonists, the Spanish settlers freed themselves from the mother country. Mexico is a republic, and Central America contains several small republics.

What is the capital of Mexico? It is the largest city. Railroads extend from it through northern Mexico into the United States, and also to the chief Mexican ports — Vera Cruz and Acapulco.

The United States owns a strip of land, called the Canal Zone, across the Isthmus of Panama. Through this it is digging a canal in which the largest ships may pass across the isthmus between Colon and Panama, and thus avoid the long voyage around South America.

TOPICS ON MEXICO AND CENTRAL AMERICA

I. COUNTRIES. Surface and climate.
II. PRODUCTIONS. Of the mines; plantations; forests; pastures.
III. PEOPLE. Ancestors. Language. Food. Houses.
IV. CITIES AND PANAMA CANAL.

MARKET PLACE IN A PORTO RICO CITY.

WEST INDIES

What group of islands is southeast of North America? Name the four largest islands. What group north of Cuba forms part of the West Indies? What sea is between the West Indies and South America? In what zone are most of the West Indies?

The larger islands of the West Indies are the tops of a high mountain chain whose lower parts are covered by the sea. The Bahama group consists of low, sandy islands.

The islands are so cooled by ocean breezes that they are neither so hot nor so unhealthful as the lowlands of Central America; but at times they are visited by terrible storms of wind, or *hurricanes*, which destroy crops, blow down buildings, and sink ships.

Many of the islands are surrounded by coral *reefs*. These are low rocks made by the coral animals, or *polyps*.

The polyps live in great colonies and are attached to the bottom of the ocean. When they die their stony skeletons are left, on which other polyps grow, like buds, and these on dying leave a foundation for still other buds. In this way the rocky mass gradually grows upward to the surface of the water, where it forms a low island or a ragged reef of coral rock. Such coral reefs and islands are found in the warmer parts of all the oceans where the water is clear and not too deep. Some coral islands form a nearly complete ring, partly inclosing a portion of the sea. Such islands are called *atolls*.

In the shallow waters of the Bahamas, sponges are found. They are jellylike animals which fasten themselves to rocks and feed on what the waters bring them. The sponges which you use are the skeletons of these animals.

The soil of the West Indies is generally very fertile; and on most of the islands there are dense forests containing palm trees, mahogany, and *lignum vitæ*, a very hard wood of which tenpin balls are made. But the West Indies are especially noted for the great crops of sugar cane which are grown, and made into raw sugar. Most of the sugar used in the United States is grown in Cuba. Much of the finest tobacco also comes from the West Indies. Coffee, bananas, and other tropical fruits grow in these islands. From the Bahamas, pineapples and oranges are shipped to our Eastern cities.

Columbus first landed on one of the Bahama Islands; therefore the Spanish claimed the West Indies. They brought so many negroes

LOAD OF SUGAR CANE IN CUBA.

THE PALACE IN HAVANA, CUBA.

from Africa to work on the plantations, that now there are more negroes than white people on the islands. But Spain lost all of the islands. Porto Rico is owned, and Cuba is largely controlled, by the United States, although Cuba is a separate republic. Most of the other islands belong to England; but Haiti is occupied by two negro republics.

Where is Havana? It is the capital of Cuba, and the largest city in the West Indies. It is a great sugar and tobacco market.

TOPICS ON THE WEST INDIES

I. ISLANDS. Large. Group of small.
II. CLIMATE AND SOIL.
III. PRODUCTIONS. Sugar. Tobacco.
IV. HISTORY AND GOVERNMENT.
V. HAVANA.

CORRELATIONS AND COMPARISONS

Position and Coast. — In what zones is North America? What ocean borders each side of it? From what grand division does each ocean separate it? What two large bays and one strait are north of it? What two gulfs and one sea are east? What gulf, sea, and strait are west? Which coast is the most irregular? Name four important bays on the east coast; one bay and one sound on the west coast. Name the most important islands.

Surface and Drainage. — Where is the great highland of North America? Name its important mountains. What five great river systems are east of this highland? What three systems are on its west slope? Which river basins contain large lakes? Name nine large lakes. Where are the great lowlands? What mountains are in the eastern part of North America? What river flows into New York Bay? Why is it important? Name three branches of the Mississippi.

Climate. — In what zones is Canada? In which are Mexico and Central America? In what zone is the United States? In what part of North America is the climate most suitable for such food plants as grain and potatoes? In what part do most of the people live? Why is farming not pursued in the far north? Why is it not generally pursued on the western highland? For what industry does the climate adapt this highland? How does the northern part of the grand division differ from the southern part in climate? in products? in number of inhabitants?

Products. — Sketch, or trace from map, p. 68, an outline of North America, and write in the proper places the names of the chief farm products: wheat, corn, rice, potatoes and vegetables; apples, oranges, grapes, bananas; coffee; sugar cane, sugar beets; cotton; tobacco.

On another sketch or tracing, locate animal industries: cattle, hogs, sheep, wool; fish, oysters; furs; seals.

On another sketch or tracing, locate the forests and mining regions: coal, iron, copper, petroleum, gas, gold, silver, lead, salt.

Cities. — What industries are carried on in cities? Tell how the location of each of these cities is favorable, and has helped to make it an important city: —

New York	Buffalo	Pittsburg	Memphis
Philadelphia	Detroit	Kansas City	Birmingham
Boston	Milwaukee	Omaha	San Francisco
Baltimore	Duluth	New Orleans	Portland
Washington	Toronto	Savannah	Seattle
Montreal	St. Louis	Charleston	Los Angeles
Quebec	Minneapolis	Galveston	Denver
Chicago	Louisville	Havana	Salt Lake City
Cleveland	Cincinnati	Atlanta	Dallas

Subdivisions and People. — Write a list of the New England states; Northern states; Southern states; Plateau states; Pacific states. Name the state in which you live, and its capital. What is the form of government of the United States? the form of government and capital of Canada? of Mexico? What people did the white men find in North America? Where do the Indians live now? the Eskimos? What river separates the English- from the Spanish-speaking people of North America?

SOUTH AMERICA

LOCATION, SIZE, AND SHAPE

Here is a map showing the shape, surface, and rivers of South America. Compare it with the similar map of North America. Which of these two grand divisions is the smaller? Which is the more regular in shape? Which has the greater number of islands near its coasts?

What ocean is east of South America? What ocean is west? What sea is north? What land is northwest? What isthmus connects South America with North America?

What circle crosses the northern part of South America? What other circle crosses the grand division? In what zone is the southern part of South America? the northern part? (See map of Hemispheres and Zones.)

SOUTH AMERICA. (Same scale as maps of North America, Eurasia, Africa, and Australia.)

South America is the smaller grand division of the Western or American Continent. It forms a great peninsula southeast of North America, with which it is connected by the Isthmus of Panama. It extends across the equator into the southern hemisphere.

The greater part of South America lies in the torrid or hot zone, where there is no change from a summer season to a winter season during the year. The weather in the lowlands is always warm, and the leaves are always green.

The southern part, however, lies in the south temperate zone, and in that zone the four seasons, spring, summer, autumn, and winter, follow one another as they do in the north temperate zone. But we have learned that when it is summer in the north temperate zone, it is winter in the south temperate zone.

So in the southern part of South America the Fourth of July is a winter day, and Christmas is a summer day.

South America has roughly the shape of a triangle. Which side is longest? Which is shortest? What is the general direction of each of the three sides?

Which has the greater number of gulfs and bays, North America or South America? Where is the Gulf of Guayaquil? Lake Maracaibo is a gulf rather than a lake. The mouths of two rivers flowing to the Atlantic form bays. Name the rivers.

What island is south of South America? What cape is south of this island? What strait is north of it? Find the Falkland Islands. Where is Trinidad Island? It contains a large lake of pitch or asphalt. Much of the asphalt used in making our street pavements comes from this island.

Sketch an outline of South America again and again until you can make a good outline in two minutes.

TOPICS FOR ORAL OR WRITTEN WORK

I. Location of South America. Direction from North America. Waters surrounding. Circles crossing. Zones.
II. Size. Compare with North America.
III. Shape. General. Direction of coast lines. Gulfs.

SURFACE

What great mountain chain borders South America on the west? What small highland is in the northeast? What larger highland is in the east? What is the northern part of the great central lowland called? the central part? the southern part?

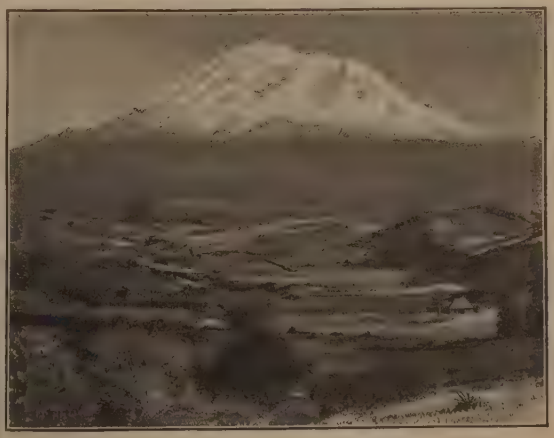
The Andes Mountains form a high and almost unbroken wall along the western border of South America from the Caribbean Sea to the Strait of Magellan.

What is the general direction of the Andes highland? Where is it broadest? The broadest part of the Andes highland is called the plateau of Bolivia. Find it on the map. It is nearly twice as high as the much broader plateaus of the Rocky Mountain highland.

In the central part of the Andes highland there are two main ranges of mountains, one on the eastern and the other on the western border of the plateau of Bolivia. In the northern part of the grand division the highland divides into several ranges, while south of the plateau of Bolivia it has only one main range.

Although the Andes highland is not so broad as the Rocky Mountain highland, its ranges are much higher. They are so high that their higher summits are covered with snow all the year, even in the hot zone.

Many peaks of the Andes are volcanoes, built up in part by the lava thrown out from their tops. At times there are severe earthquakes, when the ground in this highland shakes so violently that buildings are thrown down, often killing many people.



A Volcano in the Andes.

The Andes have long been noted for mines of silver, copper, and gold; and their high slopes and plateaus afford pasturage for sheep, cattle, and several kinds of llamas.

LLAMAS.

Llamas are woolly animals a little larger than goats. Some llamas are used to carry packs of merchandise in the Andes, and flocks of a smaller kind are kept for their fine long wool. Like the camel, the llama can live for several days without food or drink.

The condor, one of the largest of birds, is found in the region of the Andes. It stands higher than a table, and the width of its outstretched wings is twice the height of a man. It prefers the flesh of dead animals for food, but when very hungry a condor will sometimes carry away a lamb or even a young calf.

From the Andes highland the country slopes east to the Atlantic Ocean and west to the Pacific. Which is the longer slope?

The plateaus of Brazil and Guiana, in the eastern part of South America, are not very high. They are traversed by low mountain ranges.

The surface of South America between the Andes and the eastern highlands is a great lowland plain, which is lower and flatter than the great central plain of North America.

Model South America, showing the Andes, the plateaus of Brazil and Guiana, and the central plain.

TOPICS FOR ORAL OR WRITTEN WORK

I. ANDES HIGHLAND. Compared with Rocky Mountain highland: in position; in direction. Describe: length; height; peaks. Plateau of Bolivia.
II. OTHER HIGHLANDS. Of Brazil. Of Guiana.
III. LOWLANDS.

RAINFALL AND RIVERS

What great river drains the lowland between the plateau of Brazil and the plateau of Guiana? What river is in the lowland between the Andes and the plateau of Guiana? What two rivers between the Andes and the plateau of Brazil unite to form the Plata River? What river drains the eastern part of the plateau of Brazil?

THE ANDES NEAR THE SOURCE OF THE AMAZON.

The winds in the torrid zone generally blow from the east, and the warm, moist winds from the Atlantic bring heavy rains to the part of South America east of the Andes in that zone. This is one of the rainiest regions of the earth. In it are many large rivers. The Amazon is the largest of these.

The Amazon rises in the Andes only a few miles from the Pacific coast, and flows eastward across South America to the Atlantic Ocean through the middle of the rainy region. With its many large tributaries it forms the largest river system in the world. At its mouth it is so wide that one can not see across it from one bank to the other, and even halfway across the continent it is several miles wide. It is so

deep that large steamers sail up the river to the foot of the Andes. On which side of the river are most of its great branches? Name the longest. Name a northern branch.

The plains of the Amazon are called *silvas*, which means "forests." Dense, dark forests cover the whole country. Once or twice a year the rivers overflow their banks, and hence large parts of the silvas are always swampy. In these parts the tall trees are matted together by hanging vines and air plants, while high ferns and other plants grow in the spaces between the trees. The vegetation is green the year round. Boats on the rivers are the only means of travel.

These forests are full of wild animals. The catlike jaguar is the largest and fiercest. The immense boa constrictor coils around his prey and crushes it. One of these great serpents is shown in the picture. Troops of monkeys live and travel long distances among the tree tops. These forests yield rubber, mahogany, and dyewoods.

North of the Amazon basin is the basin of the Orinoco River. This river, though smaller than the Amazon, is still a great river, deep enough for large vessels for several hundred miles from its mouth. Its broad, flat valley is called the *llanos*, the Spanish word for plains.

Although there is no winter season in the torrid zone, there are in many places a wet and a dry season each year. During the wet season the llanos are covered with grasses and herbage which afford pasturage for millions of cattle and horses. During the dry season the llanos become parched and brown, and the cattle seek the hills.

South of the Amazon basin is the basin of the Plata River. This river, often called Rio de la Plata, is really a great bay longer and wider than Chesapeake Bay. The Parana and the Uruguay rivers flow into the head of this bay, and with the Paraguay River are the chief streams of the Plata basin. This basin is as large as the Mississippi basin.

The plains west of the Plata are called *pampas*, and are covered with long grasses with feathery white plumes. The pampas are among the best pasture lands in the world for sheep, cattle, and horses; and near the Plata River are the chief wheat-growing regions of South America.

The São Francisco River is a highway of trade, and many people live in the lower part of its basin.

IN THE SILVAS.

The moist winds from the Atlantic, after blowing over the Amazon valley, lose the last of their moisture in crossing the cold lofty summits of the Andes. They descend the western slope of those mountains as such dry winds that little rain falls on the Pacific coast of South America in the torrid zone. Much of this coast is a desert, the only vegetation being in the valleys of the snow-fed mountain streams.

Farther south, however, in the south temperate zone, the winds generally blow from the west, as they do in the north temperate zone. Hence in the southern part of South America the west slope of the Andes receives ample rains and is covered with forests, while the region east of the Andes is an arid region like the Great Plains in the United States.

Sketch South America; locate the Orinoco, Amazon, and Plata rivers.

TOPICS FOR ORAL OR WRITTEN WORK

I. Central Plain of South America. Extent. Compare with central plain of North America.
II. Llanos. River. Seasons. Life.
III. Silvas. Rivers. Rainfall. Forests. Animals.
IV. Pampas. Climate. Life.
V. Pacific Slope. North. South.

PEOPLE AND COUNTRIES

There are fewer people in South America than in any other grand division except Australia. What parts are nearly uninhabited? The most thickly settled regions are about the mouth of the Plata and northward along the east coast. Much of the interior of South America in the torrid zone is too rainy and too densely covered with forests to be cultivated or thickly peopled. But on the pampas west of the Plata it is cooler, and there is less rain; and this region is rapidly becoming the most thickly settled part of South America.

THE DOTS SHOW WHERE THE MOST PEOPLE LIVE.

When first visited by white men, South America was inhabited only by Indians. Most of the Indians were savages, but those called Incas, in Peru, were partly civilized. They wove coarse cloth, made pottery, and built excellent roads. Where is Peru?

There are still many wild Indians in the interior of South America. Most of them live in the region of the silvas, but some live among the mountains and some in the arid region of the south. Those along the Amazon hunt and fish. They use spears for killing fish and turtles, and blowguns with poisoned arrows for birds and other game. Those in the south live chiefly by hunting a kind of llama which wanders in great herds over the arid plains.

Soon after Columbus visited America, it was learned in Europe that gold and silver were to be found in South America, and a great many people went there to seek these metals. Most of them went from Spain and from Portugal, a country adjoining Spain.

The Spaniards took all the Andes highland portion of South America and much of the Plata basin. Many of the people now living there are the white descendants of these Spanish settlers, but the laboring classes are mostly half-breeds of Spanish and Indian descent.

Name all the countries of South America crossed or bordered by the Andes Mountains. Name the capital of each. Which of these countries are crossed by the equator? Which one has no seacoast? On what ocean or sea does each of the others border? What two small countries are east of Argentina? In Uruguay and Paraguay, as in Argentina and the Andean countries, the Spanish language is spoken.

The Portuguese settled the eastern part of South America, and their descendants, both whites and half-breeds, still live in Brazil, and speak the Portuguese language. Many ne-

INDIAN WOMAN GRINDING CORN.

groes were taken to Brazil from Africa to work on the plantations along the coast, and their descendants, with the half-breeds, still form the laboring classes there.

All the South American countries were at first under the control of European nations, principally Spain and Portugal; but one by one they rebelled against the mother countries, until now Guiana only is held by European powers. All the other countries are republics. The chief hero in the South American revolutions was Simon Bolivar, often called "the Washington of South America."

With both the Spaniards and the Portuguese settlers came many Catholic priests, who established missions and schools among the Indians; and to-day the Roman Catholic is the prevailing form of religion in South America.

TOPICS ON PEOPLE OF SOUTH AMERICA

I. INDIANS. Former condition. Present condition.
II. SPANIARDS. Spanish South America. Countries.
III. PORTUGUESE. Portuguese South America. Country.
IV. NEGROES.
V. LANGUAGES OF SOUTH AMERICA.
VI. FORMS OF GOVERNMENT.

ROMAN CATHOLIC CATHEDRAL, LIMA, PERU.

BRAZIL AND GUIANA

Locate Brazil. Describe its surface. In what three great river basins does it lie? In what zones is it? Beginning with Guiana, name the countries that border Brazil.

Brazil is about as large as the United States, and contains about a third of the people in South America.

Brazil supplies to other countries many useful things, such as rubber, hides, tobacco, cotton, cacao, and sugar, but it is especially noted for its coffee. It produces nearly twice as much coffee as all the rest of the world.

The coffee tree bears beautiful purple berries, each of which contains two seeds, which are the coffee of commerce. The ripe berries are gathered two or three times a year and thrown into vats, where the soft

DRYING COFFEE, BRAZIL.

part is washed away from the seeds. The seeds are then dried, packed in sacks, and sent to the market.

The coffee plantations are in the warm plateau region of southern Brazil. Where is Rio de Janeiro? The name means "River of January." It is the capital and largest city of Brazil, and is named after a little river on which it is situated. The river is so called because it was discovered one summer day in January. Much of the coffee is shipped from this port, and there-

fore Brazilian coffee is often called *Rio* coffee.

In the narrow and crooked streets of Rio de Janeiro may be seen many negroes — men, women, and children — carrying burdens of all kinds balanced on their heads. On the outskirts of the town are handsome residences overlooking one of the most beautiful harbors in the world. The bay is nearly surrounded by high hills, where the wealthy citizens live during the warmer and rainier part of the year when yellow fever prevails in the city.

City and Harbor of Rio de Janeiro.

Where is Santos? Much coffee is shipped from this port.

Where is Pernambuco? There are sugar plantations in this region.

Where is Bahia? Sugar and tobacco are shipped here.

Rubber is an important product of Brazil. It is gathered by the Indians of the silvas, in the swampy forest. With his hatchet the Indian cuts a gash in the bark of a rubber tree; then with a piece of clay he fastens a little cup to catch the milky sap that slowly trickles out. When he has gashed about a hundred trees, he collects the sap from the cups. Next he builds a fire of palm nuts, and, pouring some of the sap on a pole, rolls it into the thick smoke of the burning nuts until the sap has become hard and elastic. Then he rolls the pole back, pours on more sap, and so on. The hardened sap forms the rubber of commerce.

Smoking Rubber.

Where is Para? Nearly all the rubber is sent from Para to the United States and Europe, where it is used for wheel tires, overshoes, and hundreds of other things.

The Brazil-nut tree and the cacao tree grow in the silvas. The fruit of the cacao is a bean from which cocoa and chocolate are made. Cassava, or manioc, the root from which tapioca is made, is also a native of Brazil. With the meal made from this root, the natives make cassava bread, which they use largely for food.

Where is Manaos? It is the largest town in the interior of Brazil.

Guiana is much like Brazil in surface and climate. The English own one part, the French another, and the third part is owned by another European people called the Dutch. The planters are white; many of the laborers are negroes. France sends criminals to French Guiana as a punishment. Sugar, gold, and cocoa are the chief exports. Find the capital of each division.

On the sketch map of South America, indicate Brazil, and locate Rio de Janeiro.

TOPICS ON PRODUCTS OF BRAZIL

I. Coffee. What it is. Location of the coffee plantations. Chief ports for shipment of coffee.
II. Sugar. The sugar plantations.
III. Rubber. What it is. How gathered. For what used.
IV. Other Products.

Wharves at Buenos Aires.

ARGENTINA AND THE PLATA COUNTRIES

In what zone are the pampas? What river system drains this plain? In what direction does the plain slope? What mountains are west of it? What three Spanish-speaking countries are in the Plata basin? Which of these is the largest? Which has no seacoast?

Next to Brazil, Argentina is the largest and richest country of South America. Every year many thousand people come from Europe to make their home in its grain-growing lands, and there are more white people there than in any other country of South America.

The herdsmen of the pampas, called *gauchos*, are of mixed Spanish and Indian blood. There are no better horsemen in the world, and none more skillful with the lasso.

The herds of cattle and sheep form the chief wealth of the country, and great quantities of live cattle, packed meat, beef extract, tallow, hides, and wool are shipped to Europe.

A Herd of Cattle in Argentina.

The farms are mainly in the valley of the Parana River, from which the grain can be easily carried to the markets by vessels, but railways have been built to many of the farming districts. There are more miles of railway in Argentina than in any other South American country. One line is to cross the continent. Argentina exports nearly half as much wheat and corn as the United States, mostly to England and France.

In Paraguay and Uruguay cattle raising is the chief pursuit, though Uruguay produces also large crops of wheat. An important industry in Paraguay is the gathering, curing, and shipping of the leaves of a kind of holly, called *maté*, which are widely used in place of tea in all the southern part of South America.

What is the capital of Argentina? Buenos Aires means "good air," but the city is not very healthful. It is the largest city of South America, and a great commercial center. Channels have been dredged in the shallow harbor, so that steamers can now come up to the wharves. In the crowded streets and showy shops are heard many languages, for one quarter of the people are foreigners. Where is Montevideo? It is the capital and largest city of Uruguay. Lines of steamships connect both cities with seaports of Europe. Find the capital of Paraguay. In most of the large cities of these countries there are elec-

tric lights, telephones, schools and colleges, and newspapers.

Sketch a map of South America; show Argentina, Paraguay, and Uruguay.

TOPICS ON ARGENTINA AND THE PLATA COUNTRIES

I. Location and Boundaries. Argentina, Uruguay, Paraguay.
II. Surface and Drainage.
III. Climate and Rainfall.
IV. Vegetation and Animals.
V. Cities.

ANDEAN COUNTRIES — CHILE

What country of South America forms a long, narrow strip on the western slope of the Andes? What countries are east of it? What water is west?

Northern Chile is in the rainless region and is therefore a desert. In central Chile are many farms, chiefly in the valleys of the mountain streams where water may be had to irrigate the crops. Southern Chile has ample rainfall, and the mountain slopes are covered with forests.

Capitol, Santiago, Chile.

Valparaiso, Chile.

Grain, fruit, copper, and silver are produced, but the chief wealth of Chile is "nitrate," or saltpeter, from which gunpowder is made, and which is used in Europe as a fertilizer. It is dug from old lake beds in the desert region of the north. Where is Iquique? Most of the saltpeter is shipped from this port.

Chile is one of the most densely settled and progressive countries of South America. The people are energetic and prosperous, and have excellent schools and colleges.

Where is Santiago? Earthquakes are frequent there, and most of the houses are low, with very thick walls. There are many beautiful streets and parks, and many large and imposing public buildings. Find Valparaiso. It is the largest seaport on the western coast of South America. A railway is being built from this city to Buenos Aires.

On a sketch map of South America show the location of Chile.

TOPICS ON CHILE

I. Location and Boundaries.
II. Nitrate. Where found. Where taken. How used.
III. People.
IV. Cities.

NORTHERN ANDEAN COUNTRIES

Name the five northern Andean countries. In what zone are they? In what zone is the greater part of Chile? On which slope of the Andes is it? What great river system receives drainage from the eastern part of the northern Andean countries? What part of Chile has abundant rainfall? Which side of the northern Andean countries receives the greater amount of rainfall? Why?

The northern countries of the Andes are much alike in surface and climate. Each country is crossed by the Andes highland. The plateau is so high that its climate is delightful, although in the torrid zone; and the volcanic peaks so high that they are always capped with snow. The broad eastern slope of each country extends into the moist lowlands of the silvas or the llanos. The Pacific coast is a hot, dry region crossed by short mountain streams.

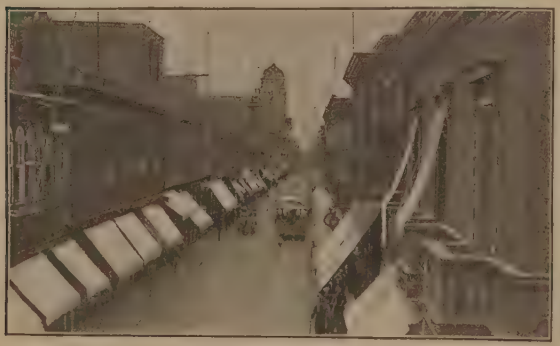
In spite of the dryness of the western slope, more people live there than in the moist re-

gion east of the mountains. The short mountain streams have wide valleys, and furnish enough water to irrigate the farms. Abundant crops of sugar and cotton are produced. Between these irrigated lands are hot deserts covered with drifting sand.

The Incas lived on the high plateaus of the central Andes. Where is Cuzco? It was the capital of the Inca empire, and was surrounded by thick walls of stone. Within the city was the Temple of the Sun, to which pilgrims came from every part of the empire. On an island in Lake Titicaca was another temple almost as magnificent.

After a savage war the Spaniards conquered the Incas, and destroyed their great empire. A few descendants of the Incas still live in this region. They are skillful weavers of woolen cloth, and own herds of llamas and cattle.

Lake Titicaca is nearly half as large as Lake Ontario. It can be reached by railroad from the Pacific coast. Travelers now cross it in steamboats, but the natives use boats woven of rushes.



PRINCIPAL STREET OF LIMA, PERU.

Next to Chile, Peru is the leading country of the Andes. It lies mainly on the high plateau. Sugar, silver, cotton, and wool are the chief products. The cinchona tree, from the bark of which quinine is made, grows on the eastern slope of the Andes. Lima, high on the mountain slope, is the capital and largest city. Callao is its seaport, with which it is connected by railroad.

Bolivia has no seacoast. Most of its products are sent by rail to ports on the Pacific coast for shipment, but some are floated down the rivers to Buenos Aires or Para. Silver, tin, and rubber are the chief exports. La Paz is the largest city. Sucre is the capital. Potosi is near rich silver mines.

Ecuador is the Spanish name for the equator, which crosses the country. It is the smallest country of the Andes. Cocoa is the chief

CACAO MARKET, ECUADOR.

product. Eleven snow-capped peaks can be seen from Quito, the capital. Guayaquil is the chief seaport, but there is little foreign trade.

In Colombia herding and coffee growing are the most important industries. Coffee, hides, and some gold and silver are the chief exports. Barranquilla, at the head of the Magdalena delta, is the chief commercial city. What and where is the capital of Colombia?

Many years ago, a Spanish sailor found, in Lake Maracaibo, a village whose houses were built out in the water on posts. Because Venice, a city of Europe, is built out in the water in somewhat the same way, he called the vil-

STREET SCENE IN LA PAZ, BOLIVIA.

lage Venezuela, or "Little Venice." This finally became the name of the country. Coffee, cocoa, gold, and hides are the chief products. Caracas, the capital, and Valencia are the largest cities.

Sketch South America; show the northern Andean countries.

TOPICS ON NORTHERN ANDEAN COUNTRIES

I. LOCATION AND NAMES.
II. SURFACE AND CLIMATE. The highland. Western slope. Eastern slope.
III. PRODUCTS.
IV. PEOPLE.
V. CITIES.

CORRELATIONS AND COMPARISONS

Location. — What isthmus connects the two grand divisions of the Western Continent? How do these grand divisions compare in size? How far north does North America extend? How far south does South America extend? Which grand division extends farthest east? farthest west? Where does a tropic cross each? What countries are included between the tropics?

Shape. — What is the general shape of each of the Americas? In what respects are their Pacific coast lines alike? In what respects is the northern coast line of North America like that of South America? In what ways is it different? Where are the ice-bound coasts of the Western Continent? Which of the Americas has the more islands? the more peninsulas? the more good harbors? the longer coast line?

Surface. — How are the Americas alike with respect to highlands and lowlands? Compare the great highlands of the grand divisions in extent; in height; in width; in mountain ranges. Compare the great lowlands in size; location; water partings. Compare the plateaus of Brazil and Guiana with the eastern highlands of North America.

Drainage and Climate. — What three large rivers drain the Atlantic slope of South America? Which one corresponds in position to the Mississippi in North America? In what respects are the basins of these two rivers alike? What grain is a leading product of each? How does the Amazon basin compare with the Mississippi basin in size? in climate? Which basin has the more luxuriant vegetation? Why? Which has the more people? the more cities? Name the longest branch of the Amazon; three streams of the Plata basin.

Compare the Pacific slopes of the Americas in width, and in length of rivers.

Compare the two Americas with regard to the size and number of large lakes.

Forests. — Where are the forest regions of North America? of South America? What is made from the sap of a South American tree? from the bark of the cinchona tree? From what seaport is rubber shipped?

Foods. — Where are the grazing regions of the Western Continent? In which grand division are they on a plateau? on a lowland? What are the meat-exporting cities of North America? of South America? Where are the wheat-growing regions of this continent? Where does the coffee tree grow?

Minerals. — What minerals are found in both Americas? Where? What minerals are more abundant in North than in South America? Where is saltpeter produced? For what is it used?

People. — In which of the Americas was the most civilized tribe of Indians? What two languages are mostly spoken in North America? in South America? What form of government prevails in the Americas? What regions of the Western Continent are sparsely inhabited because they are too dry? too cold? too warm?

Countries. — What countries of South America are on the north and east coasts? What ones are on the west coast? Which ones have no coasts? Name the capital of each country. Name the chief seaport on the Pacific. Which country has the most railways? Give some reasons why the Amazon basin has so few railways.

ATLANTIC OCEAN
NORTH SIDE
ARCTIC OCEAN
Bering Strait
BRITISH ISLES
Arctic Circle
Nova Zembla
BERING SEA
NORTH SEA
Scandinavian Pen.
G. of Bothnia
White Sea
Yenisei
Lena
Stanovoi Mts.
Kamchatka
Spanish Peninsula
Bay of Biscay
Baltic Sea
EUROPE
Siberian Plain
Ob
SEA OF OKHOTSK
Sakhalin I.
Gibraltar
MEDITERRANEAN SEA
Ural Mts.
Lena
Baikal
Yablonoi Mts.
Amur
Danube
Dnieper
Volga
Black Sea
Plat. of Asia Minor
Caucasus Mts.
Caspian Sea
Ural
Lake Aral
L. Balkash
Altai Mts.
Khinghan Mts.
JAPAN SEA
JAPAN I.s
EAST SIDE
PACIFIC OCEAN
Desert of Gobi
Tropic of Cancer
Cyprus
Euphrates
Pamir Plat.
Thian Shan
Kuenlun
Hoang Ho
G. of Pechili
Korea
YELLOW SEA
Plains of China
Yangtze
EAST CHINA SEA
Formosa
AFRICA
Plateau of Arabia
Red Sea
Plateau of Iran
Hindu Kush Mts.
Persian Gulf
Indus
Himalaya Mts.
Plat. of Tibet
Plains of India
Ganges
Bab el Mandeb
ARABIAN SEA
Plateau of the Dekkan
BAY OF BENGAL
Irrawadi
Mekong
Gulf of Siam
Malay Peninsula
SOUTH CHINA SEA
Philippine Is.
I. of Ceylon
Equator
INDIAN OCEAN
Sumatra
Borneo
Celebes
SOUTH SIDE
EURASIA
1000 miles
Same scale as the maps of North America, South America, Africa, and Australia.

EURASIA

POSITION, SIZE, AND SHAPE

Europe and Asia together, as we have learned, are called Eurasia. What circle crosses the northern part of Eurasia? the southern part? What circle crosses the islands near the southeastern portion? In what zones is Eurasia? What other grand division lies in three zones? If you will trace, on tissue paper, the maps of North America and South America, and then cut them out and lay them over this map of Eurasia, you will get some idea of the size of this large grand division.

What ocean is north of Eurasia? east? south? What waters nearly surround the western part? What grand division is southwest of Eurasia? What two seas lie between Eurasia and Africa? What isthmus connects them? A ship canal, called the Suez Canal, has been dug through this low and sandy isthmus. What strait connects the Mediterranean Sea with the Atlantic Ocean? the Red Sea with the Indian Ocean? What strait separates Eurasia from North America? On which side of Eurasia are islands most numerous?

On the Suez Canal.

Like each of the Americas, Eurasia has the shape of a triangle, but the southern and eastern sides are very irregular. The western part of the triangle is a great peninsula called Europe, projecting westward from the main body of the grand division, which is called Asia.

In the Western Continent, as we have learned, there is a long mountain system in the western part, and less elevated highlands in the eastern part. In Eurasia, however, the great highland extends in a broad ∨ shape, and has a general east and west direction.

The western arm of the highland extends from northwest to southeast. The eastern arm extends from northeast to southwest. The region where these two arms meet is the highest part of the great Eurasian highland, and contains the highest mountains in the world. One range that is always snow-capped is called the Himalayas, or the "abode of snow."

The plateaus of the highland region extend nearly to the ocean on the south and east sides of Eurasia, but on the north side a wide lowland plain lies between the highland and the coast. The low mountain range that divides the great northern plain is sometimes called the boundary between Europe and Asia. What is its name?

Some of the largest rivers in the world flow east or south from the eastern arm of the Eurasian highland. Name four rivers on the eastern slope of this arm; three on the southern slope.

A Distant View of the High Himalayas.

More than three fourths of the people in the world live in Eurasia, and about one third of these live in the small European part of the grand division. Where do the Mongolians live? Where do the Malays live? The Mongolian race occupies most of the eastern part of Asia.

The home of the white or Caucasian race is south of the Himalayas, and about the western arm of the Eurasian highland. The Europeans are nearly all civilized white people, and are descended from the same ancestors as the greater part of the people in America. Their occupations, habits, and needs are much like ours, and by far the largest part of our trade is with them.

Southwest of the Ural Mountains find the Caspian Sea and the Black Sea. They are on the boundary between Europe and Asia. Some of the rivers draining the great plain flow southward into these seas, but many flow north and west to the ocean. The largest of these are in the Asiatic part of the grand division, and flow into the Arctic Ocean. They are frozen over for most of the year.

Homes of the Races in Eurasia.

COMPARISONS

Position. — In what hemisphere is Eurasia? In what part of the hemisphere? What four oceans border Eurasia? What ocean separates the eastern part of Eurasia from America? What ocean separates the western part from America? the northern part? How does Eurasia compare with America in size? How does it compare with each grand division of America in general shape?

Relief. — In what direction is Eurasia longest? In what general direction does its great highland region extend? Does the great highland region of North America extend in the direction of the greatest length of the continent? How is it in South America? In what respect, then, are the highlands of the three grand divisions alike? In what respect do the highlands of Eurasia differ from those of America?

In what direction from the highland region is the great plain of Eurasia? Compare this plain with the great plains of America in direction of greatest extent.

Drainage. — Name the large rivers of the great northern plain of Eurasia. Does all of this plain slope northward? Name the rivers of Eurasia which flow to the Pacific or to the Indian Ocean.

EUROPE

EUROPE. (Same scale as the relief map of the United States.)

POSITION AND COAST LINE

What circle crosses northern Europe? What ocean is north? west? What great sea and two smaller seas are south? Which grand division has the most irregular coast line, North America, South America, or Europe?

Europe is the western part of Eurasia. The greater part of Europe lies in the northern half of the north temperate zone, as Canada does. The northern part has much ice and snow and is very cold. The great lowlands in the central part, however, receive mild west winds from the ocean which give them a much warmer climate than that of Canada. The southern coasts are sheltered from cold north winds by mountains, and are warm enough for oranges and other heat-loving plants to grow, although these coasts are as far north as Ohio and Pennsylvania.

The coast line is more irregular than that of any other grand division, and forms many peninsulas, with gulfs, bays, or seas between them.

What sea opens into the Arctic Ocean? What large peninsula is in northwestern

Europe? What sea and two gulfs are east of the Scandinavian peninsula? What small peninsula is at the entrance to the Baltic Sea? What sea is west of the Danish peninsula? The North Sea is one of the greatest fishing places in the world. Millions of herring and other fish are caught there every year.

Scottish Peasant's Home.

What island group is west of the North Sea? These islands are famous as the home of the English, Scottish, and Irish peoples. What bay is west of Europe? Many sardines and oysters are taken in the Bay of Biscay. What peninsula is between the Bay of Biscay and the Mediterranean Sea? This peninsula is the home of the Spanish and Portuguese peoples.

What strait connects the Mediterranean Sea with the Atlantic Ocean? Name an island group and five islands in the Mediterranean. Which of these is nearest the mainland? What two peninsulas project into the central part of that sea? What sea is east of the Italian peninsula? What sea is east of the Grecian peninsula? There are many small islands in the Ægean Sea. A group of small islands is often called an *archipelago*.

Ships can sail through the outlet of the Black Sea into the Ægean and Mediterranean seas, and thence into the Atlantic Ocean; but the Caspian Sea is a great salt lake, with no outlet or water connection with the ocean.

Practice making a sketch map of Europe like this, but larger.

TOPICS ON POSITION AND COAST LINE OF EUROPE

I. Location. In what zones. How bounded.

II. Coast Line. Peninsulas. Indentations. Islands.

SURFACE AND RIVERS

Is the northern or the southern part of Europe the more mountainous? Where are the Caucasus Mountains? the Alps? the Pyrenees? Name four other ranges in southern Europe. What part of Europe is an extensive lowland plain?

Part of the great Eurasian highland extends across southern Europe and makes that portion of the grand division very mountainous. The highest ranges are the Caucasus in the southeast, the Alps in the south, and the Pyrenees in the southwest. Snow always lies on the peaks of these mountains, and there are large glaciers in the high valleys of the Alps and the Caucasus.

The Alpine highland is carried far to the eastward by the Carpathian, Pindus, and Balkan mountains, and it extends through the southern peninsulas in the Apennines and the Pindus mountains. All these ranges are much lower than the Alps, and are covered with forests. From the Pyrenees a dry plateau extends over the greater part of the Spanish peninsula and is crossed by several mountain ranges.

The flat-topped Kiolen Mountains are not very high, but are so far north that they are covered with snow. Many glaciers descend from them into the narrow bays, or *fiords*, which indent the Atlantic coast of the Scandinavian peninsula.

A Glacier in the Alps.

The Ural Mountains are a low, gentle swell of land on the eastern boundary of Europe.

Central Europe is a vast, flat, lowland plain. The plain is narrow in the west, but in the east it extends from the Black and Caspian seas to the Arctic Ocean.

Europe is much smaller than North America or South America, and it has no river so large as the Mississippi or the Amazon. Most of its rivers, however, are important routes for trade, and many of them have been connected by canals.

Beginning in the Ural Mountains trace a line to the Strait of Gibraltar between the sources of rivers flowing to the southern seas, and of those flowing to the waters north or west of Europe. This line is the divide between the southern and the northern slope of Europe. Which slope has the longest rivers?

Which river of the north slope flows into the Arctic Ocean? Which into the White Sea? Name two large lakes in this slope. Name two rivers flowing into the Baltic. Which two rivers flow into the North Sea? The Rhine is the most famous river of Europe. Name a river flowing into the Bay of Biscay.

The largest river of Europe is in the southern slope, and flows through a great delta into the Caspian Sea. What is its name? The Volga is a very important route of commerce. The great plain near its source is low and flat, and the head waters of the Volga have been connected by canals with streams flowing to the northwest; thus goods from the Volga basin are shipped up the river to the Gulf of Finland and the Baltic ports. What other river flows into the Caspian Sea?

What three rivers flow into the Black Sea? The Danube is connected by a canal with the Rhine. What two rivers flow from the Alps — one into the Adriatic and the other into the Mediterranean? What river of the Spanish peninsula flows eastward?

Besides lakes Ladoga and Onega there are many smaller lakes in the cold, flat lowland of northern Europe. In the Alpine region, also, there are many small but beautiful lakes. They are fed by streams flowing from the melting ends of Alpine glaciers, and are visited every year by thousands of tourists.

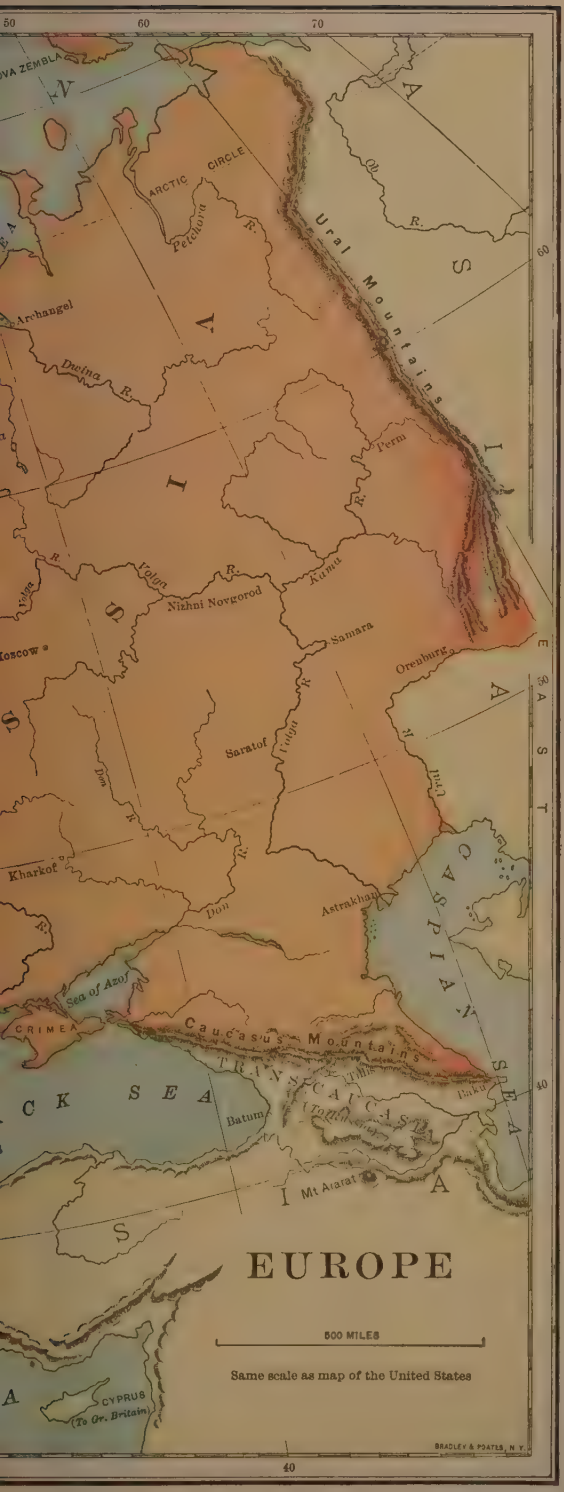
A Lake in the Alps.

Make a sketch map of Europe, showing its large rivers.

TOPICS ON SURFACE AND RIVERS OF EUROPE

I. Highlands. Location. Alpine system. Pyrenees and Spanish plateau. Caucasus. Ural. Kiolen.
II. Lowlands. Location. Extent.
III. Great Divide. Location. Direction.
IV. Rivers of the Northern Slope.
V. Rivers of the Southern Slope. Caspian basin. Black Sea basin. Mediterranean basin.
VI. Lakes. Northern. Alpine.

30 Longitude 20 West from 10 Greenwich 0 10 NORTH 20 30 40
ARCTIC OCEAN
ATLANTIC OCEAN
WEST
60
50
40
Hammerfest
North Cape
LOFODEN IS.
ARCTIC CIRCLE
Reikiavik
ICELAND
To Denmark
Mt. Hekla
FAROE IS.
(To Denmark)
SHETLAND IS.
ORKNEY IS.
HEBRIDES OR WESTERN IS.
Bergen
CHRISTIANIA
STOCKHOLM
GULF OF BOTHNIA
GULF OF FINLAND
Lake Ladoga
ST. PETERSB
Glasgow
Edinburgh
Belfast
Dublin
IRISH SEA
Manchester
Liverpool
Sheffield
Birmingham
LONDON
Thames R.
Amsterdam
Antwerp
Hague
Rotterdam
Skagerrack
Cattegat
Gothenburg
DENMARK
COPENHAGEN
Riga
Dwina R.
Hamburg
Elbe R.
BERLIN
Cologne
Leipzig
Breslau
Warsaw
Vistula R.
Kiel
ENGLISH CHANNEL
Dover
Calais
Havre
Seine R.
PARIS
Prague
Loire R.
Munich
Danube R.
VIENNA
Carpathian Mts.
Budapest
Zurich
Geneva
Lyons
Finisterre
Bordeaux
Garonne R.
Milan
Trieste
Cantabrian Mts.
Pyrenees Mts.
Cevennes Mts.
Marseilles
Oporto
Douro R.
LISBON
Tagus R.
MADRID
Barcelona
Valencia
CORSICA
ROME
Naples
Mt. Vesuvius
SARDINIA
BALEARIC IS.
C. St. Vincent
Strait of Gibraltar
Malaga
Palermo
Mt. Etna
Straits of Messina
MALTA
(To Gr. Britain)
BELGRADE
SERVIA
BUCHAREST
Danube R.
Balkan Mts.
SOFIA
BULGARIA
Adrianople
Philippopolis
CONSTANTINOPLE
Sea of Marmora
Dardanelles
Salonika
ATHENS
CRETE
0 10 Longitude East SOUTH 20 from Greenwich



THE DOTS SHOW WHERE THE MOST PEOPLE LIVE.

PEOPLE

What part of Europe is most thickly settled? (See map above.) What parts have the fewest people?

Europe is but little larger than the United States. It is one of the smallest of the grand divisions, but it is so thickly settled that no grand division except Asia contains more people. You may think that some parts of the United States are densely peopled, but west central Europe is much more crowded. Europe has about five times as many inhabitants as the United States. Even in the less thickly settled parts there are more people than in the whole of North America.

The most highly civilized people in Europe live in the thickly settled parts. They have railways, electric lights, and telegraph lines as we have, and they receive news from all parts of the world by means of telegraph cables which have been laid on the bottom of the ocean from Europe to each of the other grand divisions.

White men have been living in America for about four hundred years. That seems a long time. Yet white people have been living in Europe not only for hundreds, but for thousands, of years.

The white people who settled our country had already become civilized when they came from Europe and conquered the savage Indians whom they found here. But thousands of years ago the white people of Europe

were themselves as savage and uncivilized as the Indians in America.

The first part of Europe to become civilized was the Grecian peninsula. The Greeks were conquered by the Romans of the Italian peninsula. The Romans learned much from the conquered Greeks, and became the most famous and powerful people of Europe. They conquered all the savage peoples of western Europe and taught them how to become civilized. Where is France? Spain? England? The Romans conquered these countries and made laws for the people.

Where is the German Empire? The savage peoples who lived in that region finally conquered the Romans, and learned civilization from them.

Where is Denmark? Norway? Sweden? The early people of that region were called Northmen. They were bold seamen who sailed along the coasts of western Europe, robbing and often killing the people in the more civilized lands. But they gradually learned peaceful ways from the people whom they robbed.

Where is Russia? This was one of the last countries of Europe to become civilized. Most of the people of Russia are white, but there are also many people of the yellow race.

Where is Turkey? The Turks belong to the yellow race. Turkey is hardly counted among the civilized nations of Europe even to-day.

A person who can speak English and Spanish can make himself understood in nearly every country of America. In Europe, however, the people of almost every country speak a language of their own, which the people of the neighboring countries do not understand. Thus, the English language is spoken in the British Isles; the German language in the German Empire; the Dutch in the Netherlands; the French in France; the Spanish in Spain; the Swedish in Sweden; and so on. So that a person who wished to talk with the people in all parts of Europe would have to learn to speak many languages.

Though the languages of the various countries of Europe differ so greatly, some of them are more nearly alike than others.

Draw a line from Belgium to southeastern Italy. The countries southwest of this line were long controlled by the Romans, and their languages are not only somewhat like one another, but are somewhat like the old Latin language that was spoken by the Romans. For this reason the southwestern part of Europe is often called Latin Europe.

THE PUBLIC SQUARE OF ROME, NINETEEN HUNDRED YEARS AGO.

Draw another line from southeastern Italy to northern Norway. The languages of the countries between this line and southwestern Europe are more nearly like the old German language than the old Latin language, and so this middle part of Europe is often called Germanic Europe. This is true also of the English language, so the British Isles are classed with the countries of Germanic Europe.

VICTORIA EMBANKMENT, LONDON.

What great country is in eastern Europe? Find Bulgaria; Servia. The languages of these three countries are called Slavonic languages; they resemble one another, but are very different from the languages of western Europe.

Thus we see that most of Europe may be divided by the languages of the people into three great parts: 1. Middle or Germanic Europe; 2. Southwestern or Latin Europe; and 3. Eastern or Slavonic Europe. The people in each of these parts are somewhat alike not only in their language, but also in their manners and customs, in their religion, and often in even their general appearance. Thus, while most of the people of Europe are Christians, the people of southwestern Europe are mainly Roman Catholics, those of middle Europe are largely Protestants, and those of eastern Europe belong mostly to what is called the Greek Church. The Turks, however, are not Christians, but Mohammedans.

Make a sketch map of Europe. Show where it is most thickly settled, and mark off and name its three divisions.

TOPICS ON PEOPLE OF EUROPE

I. DENSITY OF POPULATION. Most dense part. Least dense. Comparison with the United States.

II. SPREAD OF CIVILIZATION. Greeks and Romans. People north of the Alps. Russians and Turks.

III. LANGUAGES. Europe and America. Three divisions of Europe.

THE BRITISH ISLES

Where are the British Isles? The largest island is called Great Britain. What is the name of the other large island? What strait and channel separate these islands from France? On clear days the white chalk cliffs of Great Britain may be seen across this strait from the shores of France.

It takes a fast steamship about six days to cross the ocean from New York to the port of Liverpool on the west coast of Great Britain. From there it takes a few hours to go on a fast railway train to London. London is the largest city in the world. It contains about as many people as the cities of New York and Philadelphia combined.

The country between Liverpool and London is wonderfully green and beautiful, for the air of the British Isles is very moist and mild.

LONDON BRIDGE.

Fogs are common in London, and these, with the coal smoke of the great city, begrime the buildings and often make the streets so dark that gaslights are necessary in the daytime. The streets are crowded with all kinds of wagons and carriages. There are few street car lines, but underground railways carry people about the city. The river Thames flows through the city and forms a harbor for ships from all parts of the world. London Bridge is the most famous of the many bridges which cross the river.

HOUSES OF PARLIAMENT, WHERE THE LAWS ARE MADE, LONDON.

WINDSOR CASTLE, HOME OF THE KING.

The island of Great Britain is divided into England, Scotland, and Wales. Each was once a separate nation. Ireland also was an independent state. Now they form the United Kingdom of Great Britain and Ireland, of which London is the capital.

Canada, Australia, and parts of Asia and Africa are owned by this small but powerful kingdom. The United Kingdom and all its colonies form the British Empire.

Partly because of its many rich foreign possessions, and partly because of its large manufactories, the United Kingdom is the wealthiest nation of Europe and the greatest commercial country of the world.

As in our country, the people choose men to make the laws; and the king or ruler, like our president, appoints men to see that these laws are obeyed. But the king is not elected every few years as our president is. He holds his office as long as he lives, and when he dies, his eldest son, or some other near relative, becomes the ruler. A government in which the ruler holds the position because of his birth is called a *monarchy*.

Many years ago the English people learned to make the best cloth then made, which they sold all over Europe. After a while coal and iron were found in Great Britain, and factories were built for making iron and steel goods. Great Britain is now the greatest cloth-making country in the world, and one of the greatest metal-working countries.

In northern and western England the factories are so close together that the region seems an endless manufacturing city, in which is made almost everything that can be made of iron or steel, cotton or wool.

There are so many people in England, and they do so much manufacturing, that the British Isles do not produce enough food for the people or enough raw materials for the manufactures. Many thousand steamships and sailing vessels carry the manufactured goods to other parts of the world, and bring back raw material and food. Much raw cotton goes to England from the United States to be manufactured, and much meat, wheat, and flour for food.

London and Liverpool are the principal seaports and commercial cities. Where is Manchester? It is the great center for cotton manufacturing. A canal from the sea en-

CHURCH STREET, LIVERPOOL.

ables ships to reach the city. Where is Birmingham? Iron and steel goods are made there.

Southern Scotland is a manufacturing region, but the northern part is a wild, hilly country, called the Highlands. The many beautiful lakes among the hills are much visited. On the hills many sheep and cattle graze, watched by faithful shepherd dogs. Edinburgh is the old capital of Scotland. Where is Glasgow? This city on the river Clyde is famous for the steel steamships made there.

IRISH PEASANT AND SPINNING WHEEL.

Ireland is called the Emerald Isle because of the rich verdure produced by its moist climate. The island supplies England with great quantities of vegetables, butter, and eggs. The Irish also raise flax, from the fiber of which they weave fine linen cloth. Dublin and Belfast are the largest cities in Ireland.

Many English and Scotch and Irish people have come to the United States to live.

Sketch Europe, showing the British Isles.

A LAKE IN SCOTLAND.

TOPICS ON THE BRITISH ISLES

I. LOCATION. ISLANDS AND DIVISIONS.
II. SURFACE AND CLIMATE.
III. PEOPLE AND GOVERNMENT.
IV. INDUSTRIES.
V. CITIES. London. Others.

THE GERMAN EMPIRE

What waters are north of the German Empire? What countries are east? south? west? In what direction does most of its surface slope? What river in the south flows to the Black Sea? Into what seas do all the other streams flow? What river is in the western part?

The northern part of the German Empire lies in the great central lowland of Europe. The southern part is in the Alpine plateau. The Germans are the finest soldiers in Europe, but they are just as much noted for their learning. Their schools and universities, their art galleries and their libraries, are among the best in the world. Many Americans go to Germany to attend the universities and to study music, for much of the best music has been composed by Germans.

The country once consisted of a number of small monarchies, but these are now united to form one strong nation. Each little country takes care of its own affairs, as our states do, but the king of Prussia, the largest of the German states, is the head of the united German nation. The people choose the lawmakers. Such a union of countries in one great monarchy may be called an *empire*, and the ruler, an *emperor*.

The Germans are a thrifty people. Every bit of land that can be made to yield crops is carefully planted, and even the steep hillsides along the rivers are dug away so as to form steps or terraces, which are set out with trees and vines. Women and girls do much of the

outdoor work, for the boys must go to school, and most of the young men must be soldiers for two years or more.

Grapes and vegetables are grown in the hilly lands; rye for bread, and beets for sugar, in the level lands. More than half of the sugar used in the world is beet sugar. Beets are grown for this purpose in all the countries of the European plain, but particularly in Germany. The sliced beet is put into hot water and pressed to extract the sweet juice. This is then boiled until it becomes a thick sirup, from which the sugar separates in the form of crystals. The portion of the beet which is left is used as food for cattle.

STREET IN BERLIN.

The Germans manufacture many other things besides beet sugar. They are first among European peoples in the amount of iron and steel made, and the fastest vessels that cross the ocean are German steamships. Germany is next to Great Britain in the quantity of coal mined. Woolen, cotton, and linen cloth are manufactured. In some of the villages of Germany nearly every house is a little factory, in which the people weave cloth, or carpets, or beautiful lace for which the Germans are famous.

Find Berlin. Next to London and Paris it is the largest city in Europe. It is the capital of the empire. Where is Hamburg? It is one of the greatest seaports on the mainland of Europe. On what river is Cologne? It is the center of a great manufacturing region and is famous for the *cologne water* made there.

Many German immigrants come to our country every year.

Sketch Europe; show the German Empire.

TOPICS ON THE GERMAN EMPIRE

I. LOCATION.
II. SURFACE AND DRAINAGE.
III. INDUSTRIES AND PRODUCTIONS.
IV. PEOPLE AND GOVERNMENT.
V. CITIES.

THE NETHERLANDS

What countries border the Netherlands? On the coast of what sea is this country? What river flows across it?

Almost the whole of the Netherlands lies in the low and fertile delta of the Rhine. Netherlands and Holland, another name for this country, both mean "lowland." The sea once covered a large part of the country, but the people built walls of earth, or *dikes*, from the shore, inclosing shallow parts of the sea. When a dike was finished, the water was pumped out of the basin inclosed, and in a short time the land thus gained from

GERMAN VILLAGE STREET.

the sea was ready to be plowed and sown with grain. Much of the surface of the Netherlands, in the west and southwest, is thus inclosed and is below sea level. The water which collects on this land is pumped out by windmills. Above the flat, green country the great sails of these windmills flutter like the wings of gigantic birds.

Windmills and Canal, Holland.

Canals cross almost every part of the country. Some of the larger canals are for boats and barges; some are to drain the land, and others take the place of fences. In winter, when these canals are frozen, men, women, and children go about on skates, and much of the trade is carried on over the ice.

The people of the Netherlands are called Dutch, and are related to the Germans. They are noted for their industry, and there are no better farmers in all Europe. They raise grain and potatoes, but not enough grain is produced to feed the dense population. The moist lowlands make excellent pasture, and the Dutch are famous for their butter and cheese. Dairy products and cattle are exported.

Some of the large islands southeast of Asia, some of the West Indies, and a part of Guiana in South America belong to the Dutch. Drugs, coffee, and spices are sent from these colonies to the mother country, and from there to all parts of Europe and America.

Find Amsterdam. It is the largest city of the Netherlands, and a busy seaport. It is surrounded by strong dikes. Some of the streets contain canals, so that one may look out of the window and see white sails in the streets. Many diamonds are sent to this city from Africa to be cut and polished. By law Amsterdam is the capital of the Netherlands, but the queen resides, and the laws are made, at the Hague.

New York city was first settled by the Dutch.

Make a sketch map of Europe, showing the German Empire and the Netherlands.

TOPICS ON THE NETHERLANDS

I. Location.
II. Dikes and Canals. Their uses.
III. Industries and Productions.
IV. People, Government, and Colonies.

THE NORSE COUNTRIES

What two countries are in the Scandinavian peninsula? What country occupies a peninsula and several islands south of Sweden? What straits separate Denmark from Norway and Sweden? What waters are east of these peninsulas? west?

Norway, Sweden, and Denmark are sometimes called the Norse countries, or countries of the Northmen. They are separate kingdoms, but the languages and customs of the people are much alike. These people have always been fine sailors.

Much of the Scandinavian peninsula is covered with valuable forests.

Fiord on the Coast of Norway.

Norway extends so far north that in midsummer the sun remains above the horizon for several weeks, and may be seen even at midnight! In midwinter, however, the sun does not rise at all, and darkness lasts for several weeks.

Every summer travelers go to the northern part of Norway to see the bold rocky coast, with the glacier-filled valleys, and to watch the midnight sun.

Norway is too mountainous for farming except in the southeast. It is noted, however, for its lumber and for the fisheries along the west coast.

Sweden lies on the gentle east slope of the Kiolen Mountains. South of the forest lands grain, potatoes, some sheep, and many cattle are raised. There are valuable iron mines in

PARLIAMENT BUILDING, STOCKHOLM.

Sweden. Some ore is smelted and made into machinery, and some is sent to other countries. Lumber and dairy products are exported.

What are the capitals of Sweden and Norway? Both are beautiful cities and important seaports, but the harbor of Stockholm is closed by ice in winter.

Denmark consists of a low and sandy peninsula, and several low islands to the east. Along the coast of the North Sea are many *sand dunes*, or low ridges of wind-blown sand. Most of the country forms excellent pasturage for cattle, horses, and sheep. Grain and sugar beets are raised, but Denmark is noted for its dairy products, bacon, and eggs, which are shipped in large quantities to Great Britain.

Denmark owns the islands of Iceland and Greenland, northeast of America.

Find Copenhagen. It is the capital of the kingdom of Denmark, as well as the largest city.

Many people from the Norse countries have come to the United States to live. Many of them settle in the most northern part of our country, and become industrious farmers and useful citizens.

Make a sketch map of Europe, showing the Norse countries.

TOPICS ON THE NORSE COUNTRIES

I. LOCATION. Of Norway. Of Sweden. Of Denmark.
II. SURFACE AND COAST LINE. Of each country.
III. OCCUPATIONS. Fishing. Lumbering. Farming.
IV. GOVERNMENT.
V. CITIES.

AUSTRIA–HUNGARY AND SWITZERLAND

What countries surround Austria-Hungary? Where is its seacoast? What part of it lies in the Alpine region? This part is called the Tyrol. What mountains are in the eastern part? In what river basin is most of Austria-Hungary?

Austria-Hungary, like Great Britain and Germany, is one of the great powers or nations of Europe. It is composed of two countries, Austria and Hungary, united under one emperor. In Austria German is the prevailing

PUBLIC SQUARE OF VIENNA, AUSTRIA.

language, though some Slavonic languages also are heard. Hungary is the country of the Magyars, a people of the yellow race, and also of some peoples from eastern Europe speaking different languages.

The great treeless plains of Hungary, drained by the Danube, are noted for their fine crops of wheat and corn.

There are many factories of linen cloth in Austria-Hungary, and the Bohemian glass made there is famous. The hardy mountaineers of the Tyrol are herdsmen in summer, and famous wood carvers when the mountain pastures are covered with snow.

VINEYARD IN THE TYROL.

Name the capital of Austria-Hungary. It is one of the largest and most beautiful cities of Europe. The palace of the emperor contains one of the largest libraries in Europe. Vienna is a noted center of learning and art.

Budapest, on both sides of the Danube, is in the midst of the Hungarian wheat fields, and is a great flour-milling center.

What is the name of the little country between the Tyrol and France? What countries border Switzerland on the north and on the south? What can you say of the surface of Switzerland?

Switzerland is one of the smallest and most mountainous countries of Europe. It is so high that about one third of its surface is always covered with snow.

The slopes of the Alps furnish much rich pasture, and Swiss cheese is famous the world over. Where the hills are too steep for carts, the peasant women in their big wooden shoes may be seen bearing great bundles of hay on their heads down to the valleys far below. Many of the picturesque little cottages and barns look as though they might slip down the steep mountain slopes upon which they are built.

In the towns of Switzerland, watches, music boxes, cloth, and carved wooden toys are made. Many of these goods are exported to America. Until recently the high ridges of the Alps prevented the Swiss from trading with Italy, but the two longest tunnels in the world have been made through the Alps, and railways now connect the two countries.

German is spoken in the north of Switzerland, French in the west, and Italian in the south. The Swiss are as brave as they are clever, and for many years have held their little country as an independent republic.

Geneva is a famous city, on a beautiful lake of the same name. Zurich is the largest city of Switzerland. Bern is the capital.

People from all over the world visit Switzerland to see its glaciers and grand mountain scenery.

Make a sketch map of Europe, showing Austria-Hungary and Switzerland.

SWISS COTTAGES ON A MOUNTAIN SLOPE.

TOPICS ON AUSTRIA-HUNGARY AND SWITZERLAND

I. Location. Austria-Hungary. Switzerland.
II. Surface. Alps. Carpathians. Danube basin.
III. Comparison. People. Industries. Governments.
IV. Cities. Vienna. Budapest. Geneva.
V. Scenery. Mountains. Glaciers. Lakes.

FRANCE AND BELGIUM

What country is south of England? What separates it from England? What countries are east of France? What country is southwest? What bay is west?

France is the third country in Europe in wealth and power, and is by far the most important of the Latin countries.

Most of the surface is a lowland, through which the Seine, Loire, and Garonne rivers flow northwest from the central and southern highlands. These rivers are navigable, and canals connect them with the Rhone, the chief river of the south. Canals lead also to the Rhine. The cheap water routes to the north, west, and south coasts, and the network of railroads which covers the country, have helped to make France a great commercial nation.

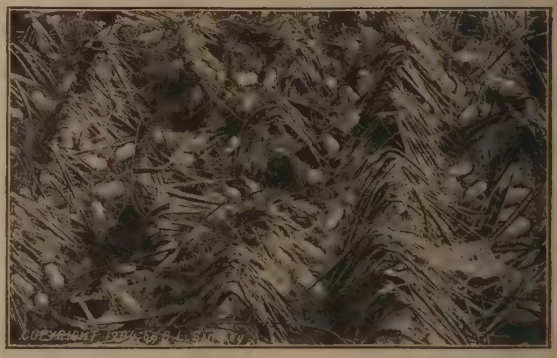
The soil is fertile and is carefully cultivated. The large crops of grain and vegetables from the north and west nearly supply the needs of France for these foods. From the sugar beets grown in the north much sugar is made.

Vineyards cover the warmer slopes of the valleys in central and southern France, and yield the chief crop of the country. France produces more grapes, and makes more wine, than any other country in the world. Orchards of olive trees are common in the south, and from their fruit is pressed the best of olive oil.

Gathering Grapes, France.

Herds of cattle, sheep, and goats in many parts of the country supply meat, wool, and the finest cheese; and from the waters of the north and west coasts many cod, herring, sardines, and oysters are obtained.

In southern France mulberry trees are cultivated, and one of the chief industries depends on them. Silk is a fiber, like the strand of a spider web, that the silkworm spins. The silkworm is a kind of caterpillar which feeds on the leaves of the mulberry tree. When the worm is full grown, it spins a cover about itself, winding the fine strand of silk round and round its body until it is wholly covered in a case called the *cocoon*.



Silkworm Cocoons.

The cocoons are softened in hot water, and the silk fibers are wound off upon spools. The fibers are spun into silk thread, which is woven into cloth. More silk cloth and velvet are made in France than in any other country in Europe.

There are coal and iron mines in the eastern half of France, and many cotton, woolen, and linen mills and other factories in which machinery, pottery, laces, kid gloves, and many other articles are made.

Where is Paris? It is the great railroad center of France and, next to London, is the largest city in Europe. Its streets are decorated with marble arches, columns, and statues, and planted with rows of trees. On summer evenings one may see people sitting at little tables along the sidewalk, before the cafés, taking refreshment and chatting gayly. In the galleries of Paris are many of the finest pictures and statues in the world. Students from every land go to Paris to study painting, music, medicine, and science. Beautiful pottery is made near this city. Havre at the mouth of the Seine is its seaport.

Bridges over the Seine, Paris.

Where is Lyons? Much silk and velvet are woven there. Find Bordeaux. It is in the midst of vineyards, and wine is its chief export. Name a great southern seaport.

For a long time France was a monarchy, but it is now a republic.

The island of Corsica in the Mediterranean and the greater part of northern Africa belong to France, as do also parts of southeastern Asia and northern South America, and several islands of the West Indies.

In former times some of the best people of France came to North America to live. Many of them settled in South Carolina, and in New Orleans and Mobile, where their descendants are among our most prosperous citizens.

Dog Cart, Belgium.

What small country is between France and the Netherlands? What water is west of Belgium? What country is east?

The small kingdom of Belgium has many large cities and is one of the most thickly peopled states in the world. In speech and manners about half the people are French, and the other half resemble the Dutch.

Because of the careful cultivation of the land, Belgium has been called the "Garden of Europe"; but it is chiefly noted for its coal and iron mines and for the extent and variety of its manufactures. These include all kinds of machinery and metal articles, glass, cloth, lace, and many other things.

What is the capital? It is noted for the carpets and lace made there. Antwerp is a large and busy seaport.

Make a sketch map of Europe, showing France and Belgium.

TOPICS ON FRANCE AND BELGIUM

I. Location and Boundaries. France. Belgium.
II. Surface and Drainage. France. Belgium.
III. Climate and Productions. In the northern part. In the southern part.
IV. Silk Industry. Mulberry tree. Silkworm. Manufacture.
V. Government.
VI. Cities. Paris. Lyons. Bordeaux. Brussels.

SPAIN AND PORTUGAL

What two countries occupy the Spanish peninsula? What country and water are north of Spain? What mountains are between Spain and France? What waters are east and south of Spain? What group of islands are east? These islands belong to Spain. What water is west of Portugal?

The Spanish peninsula is mostly a plateau made rough by high mountain ranges and deep river valleys.

STREET SCENE IN SPAIN.

The plateau is hot in summer and cold in winter, and so dry and rough that both farming and commerce are difficult. So the peninsula is the least thickly settled part of western Europe. (See population map of Europe.) Most of the people live on the slopes near the coasts, where there is more rainfall, and in the river valleys of the interior, where water can be had to irrigate the farms.

These slopes and valleys are among the best of fruit-growing lands. Oranges, lemons, English walnuts, and almonds are sent to the countries of northern Europe. Olives and olive oil are exported also. Many kinds of grapes are grown, so this is a great wine-producing region. Many of the grapes are dried on the warm ground and thus made into raisins. Cork is another product. It is the bark of a kind of evergreen oak.

Peas, onions, and garlic are raised, and with Indian corn, which is raised in the west, form the chief food of the people. On the dry plateau large herds of sheep are raised.

The great wealth of Spain is its minerals. The copper, lead, and quicksilver mines are very rich, and much valuable iron ore is shipped to England, chiefly from the port of Bilbao. Where is this port?

Both Spain and Portugal are kingdoms. After the discovery of America, Spain was rich and powerful; she owned much of Europe and nearly all of America, and had ships on every sea. The Portuguese also were great sailors, and had rich colonies in those days. They were the first to sail to Asia around the south end of Africa, and Magellan was a Portuguese sailor. But both kingdoms have lost most of their colonies.

What strait separates Spain from Africa? On the Spanish shore of this strait is a high cape called the Rock of Gibraltar. Many years ago the English captured this headland from the Spaniards and made there the strongest fortress in the world, which Great Britain still holds. This fortress is important because it commands the narrow entrance to the Mediterranean Sea.

Madrid, the capital and largest city of Spain, is in the dry plateau region. The nights are almost always cold, but the days are often so warm that nearly every one takes a nap, or

ROCK OF GIBRALTAR.

siesta, in the middle of the day. Barcelona is the greatest commercial city. Where is it? Find the capital of Portugal. Where is Oporto? It is in a great grape region.

Make a sketch map of Europe, showing Spain and Portugal.

TOPICS ON SPAIN AND PORTUGAL

I. Location. Spain. Portugal.
II. Surface and Climate.
III. Productions. Fruits. Cork. Minerals.
IV. People. Distribution. History. Cities.

ITALY AND GREECE

What long peninsula is between the Mediterranean and Adriatic seas? What two islands are west of Italy? What island is southwest? What high mountains are on the northern border of Italy? What mountain range extends through the peninsula? Where is the river Po?

The kingdom of Italy includes the Italian peninsula and the islands of Sicily and Sardinia. It is one of the six great powers of Europe. It is a great wine- and silk-producing country: more silkworms are reared and more cocoons and raw silk are produced in Italy than in any other country of Europe. Many cattle, sheep, and goats are raised, and some meat and hides are exported.

The broad, fertile valley of the Po is the greatest farming region, but farming is pursued farther south, also, where irrigation is necessary. Wheat, corn, rice, flax, and grapes are the chief crops, but thousands of mulberry and chestnut trees are cultivated, and in the south are many orchards of olives, oranges, and lemons.

Farm Yard in Northern Italy.

The cultivated chestnuts are three or four times as large as the wild ones in the United States, and are much used for food in southern

St. Peter's, Rome.

Europe. Another favorite food in Italy is macaroni, made from wheat flour.

The Italian peninsula is famous for its greatness two thousand years ago, when it was the home of the Romans. It was then the most civilized country in the world, and the center of the Roman Empire, which included all the countries bordering on the Mediterranean Sea.

As time passed, the empire was broken up. Many of the old buildings in its cities were wholly or partly pulled down and the stones used for buildings that are still standing. The Italian peninsula was divided among several nations; and the Italian language gradually developed. In recent times the peninsula was reunited to form the present kingdom of Italy.

Find Rome. It is the residence of the king of Italy, and of the Pope, who is the head of the Catholic Church. The Pope's palace, called the Vatican, is near St. Peter's, the largest church in the world. Among the famous

RUINS OF POMPEII, AND VESUVIUS BEYOND.

ruins in Rome are those of the Coliseum, which was used by the ancient Romans as a sort of circus. It could hold as many people as would make a good-sized city.

Where is Naples? It is the largest city of Italy. Much macaroni is exported from this city. Near by are the ruins of Pompeii, a city buried nearly two thousand years ago by ashes falling from the neighboring volcano, Vesuvius. After hundreds of years the ruins were accidentally found, and much of the old city has been uncovered.

Find Milan. It is the chief market in the plain of the Po.

Where is Venice? In the days of Columbus it was the greatest commercial city in Europe. It is built on some low islands several miles from the shore. Canals take the place of the main streets, and the people go about in boats instead of in wagons or street cars. The paved streets are very narrow, some of them not more than three feet wide. The city is noted for beautiful glassware, jewelry, and lace.

A CANAL AND BRIDGE IN VENICE.

The Italian immigrants in the United States are among our most thrifty and industrious laborers.

What small country occupies the peninsula southeast of Italy? What mountains are partly contained in Greece? What water is east of Greece? Most of the islands in the Ægean Sea belong to this state.

The kingdom of Greece, though larger than Belgium, the Netherlands, or Switzerland, is not so important to-day as any one of those countries.

It is famous, however, because it was the first country of Europe to become civilized. Our own civilization came to America from Europe, and may thus be said to have started in Greece. The stories of Ulysses, the Argonauts, Theseus, and many others which are read in school, were all told by the Greeks long before Rome became an empire.

The Greeks to-day speak a language much like that of ancient Greece, and they are still among the foremost traders and sailors of southern Europe.

RUINS OF AN ANCIENT TEMPLE IN GREECE.

The country is mountainous, and the very crooked coast line is fringed with mountainous islands, several of which are volcanic.

Some wheat and barley are cultivated in the valleys, and small quantities of olive oil and figs are exported; but the most important export is the small dried grapes which in commerce are known as *currants*.

Athens, the capital, is noted for the ruins of its beautiful ancient buildings; but most of the beautiful statues which ornamented these buildings have been removed to the museums of London, Rome, or Paris.

Make a sketch map of Europe, locating Italy and Greece.

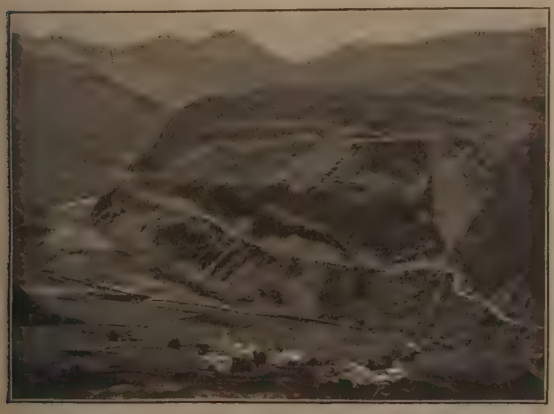
TOPICS ON ITALY AND GREECE

I. Location and Government. Italy. Greece.
II. Industries and Products.
III. Former Greatness.
IV. Cities. Rome. Athens. Others.

RUSSIA

What is the most eastern country of Europe? Compare it with the other countries in size. What land is east of Russia? What waters are north? What waters and countries are west? south? What sea or lake is southeast? Is the surface mostly flat or mountainous? In what parts are there mountains? In what two directions does the surface slope? Trace on the map the main divide of Russia.

Russia is the European part of the great Russian Empire, which extends eastward over northern Asia and southward beyond the Caucasus Mountains.



Military Road through the Caucasus Mountains.

In what zone is the greater part of Russia? In what zone is the northern part? Nearly

Lapps' Reindeer Teams, Northern Russia.

all of Russia is farther north than the Great Lakes of America. Even in the south the rivers are frozen over for several months in winter.

During the short, warm summers of northern Russia only the surface of the ground thaws, and as the water can not sink into the frozen earth beneath, the whole region becomes a swamp, called a *tundra*. Coarse moss covers this region. Farther south a great forest region occupies nearly one third of Russia. In the southwest are open plains, on which great quantities of grain are grown. This is therefore the most thickly peopled part of the country. In the southeast, however, but little rain falls, and the plains, called *steppes*, are too dry for farming.

Most of the people in Russia belong to the white race. But some belong to the yellow race, as the Finns, who live north of the Gulf of Finland and are dairymen and lumbermen; the Lapps and Samoyedes in the far north, who are hunters and fishers; and the Calmucks and Cossacks in the far south, who raise great herds of sheep, cattle, and horses.

Farming is the chief occupation of the people. The Russian farmers rarely live on their farms, but usually are grouped into villages, or *mirs*. The mir will own or rent all

Russian Carriage Team.

the surrounding farm lands and from time to time divide them equally among the villagers.

Grain and flax are the chief crops. More rye is grown than in any other country, and rye bread is the common food in Russia. Much more wheat is raised than is needed at home, so Russia, like the United States, sells much of this valuable food to the thickly settled countries of western Europe.

A great deal of flax is sold to Great Britain, to be made into linen cloth. But in southern Russia the flax is grown for its seed, from which linseed oil is made.

There are fewer mills and factories in Russia than in western Europe. Cotton and woolen cloths are made in some of the large cities, but most of the cloth used by Russian peasants is woven by their families during the long winters.

Petroleum is an important product of Russia. Find Baku. Although south of the Caucasus Mountains, it is in Russia. Near this town are the largest petroleum wells in the world. More petroleum is produced in this region than anywhere else except in the United States. Part of it is shipped by the Caspian Sea and Volga River to the interior of Russia, and part by railway to Batum, on the Black Sea, for export.

Through what waters must a vessel pass in sailing from Odessa, on the Black Sea, to St. Petersburg? from St. Petersburg to Archangel, on the north coast? It is a long journey by sea from one coast of Russia to the others, and the rivers of the country are great trade routes. They are connected by canals across the main divide, so that goods are carried by river and canal from the Black Sea or the Caspian to the Gulf of Finland or the Arctic Ocean.

There is much trade in Russia by means of fairs, to which merchants come from other parts of Europe and from Asia. Find Nizhni Novgorod. A fair is held there every summer where many thousand people buy their stocks of goods. For three months, when the fair is in progress, the river is filled with boats, and the city with a crowd of people bargaining in its thousands of shops, or visiting its cathedral, its hotels, or its theaters. During the other nine months scarcely a human being is in sight in that part of the city: all is silent, and grass grows in its deserted streets.

Red Square, Moscow.

The ruler of Russia is called the *czar*.

Name the capital. It is one of the largest cities of Europe. Where are Moscow and Warsaw? They are railway centers. Odessa is a great grain market and shipping point in the south.

Make a sketch map of Europe, showing Russia.

MARKET IN SOFIA, BULGARIA.

TOPICS ON RUSSIA

I. LOCATION AND SIZE.
II. PLAIN. Extent. Surrounding mountains. Bordering seas. Regions: tundra, forest, prairie, steppe.
III. OCCUPATIONS. Farming. Grazing. Manufactures. Mining.
IV. TRADE. Routes. Fairs.
V. PEOPLE AND GOVERNMENT.

STATES OF THE BALKAN PENINSULA

What five small countries in southeastern Europe lie south of Austria-Hungary and Russia and north of Greece? What sea is east of this region? south? west? What river flows through this region to the Black Sea? What mountains border this part of the Danube basin on the south? The part of Europe southeast of Austria-Hungary is often called the Balkan peninsula.

The ruler of Turkey is called the *sultan*. He both makes the laws and sees that they are executed. Such a government is called a *despotism*. The sultan's rule has long been harsh and cruel.

Many hundred years ago the Turks, a fierce race of yellow people who had conquered much of western Asia south of the Black Sea, crossed over into Europe and added the whole Balkan peninsula to the great empire of Turkey.

Most of the people of the Balkan peninsula belonged to the white race and were Christians, while the Turks belonged to the yellow race and believed in the Mohammedan religion: thus the customs of the two peoples were very different. The Turks were cruel to the Christians, and robbed and oppressed them. Hence the Christians were discontented, and often tried to free themselves from Turkish rule.

About eighty years ago, Greece, aided by other Christian countries of Europe, succeeded in becoming independent. Afterwards Roumania, in the same way, freed herself from Turkey and became a kingdom. Still more recently Servia and Montenegro became independent monarchies, while Bulgaria, though still supposed to pay tribute to Turkey, has her own ruler, and is really an independent state.

Thus all that is left of Turkey in Europe is a narrow strip between Greece and Bulgaria, though the Turkish Empire still includes much of western Asia. About half the people in European Turkey are Christians, and they

BULGARIAN VILLAGE.

BULGARIAN INSURGENT SOLDIERS.

are still trying to free themselves from the Turks.

The people of Turkey have been so badly governed that they are wretchedly poor. They have little wealth besides the forests and herds of cattle and sheep. Small amounts of grain, tobacco, silk, and wine are produced. Turkish carpets and rugs made by hand are sold in Europe and America.

What sea is between the Black Sea and the Ægean Sea? What strait connects this sea with the Ægean Sea? with the Black Sea? What city is on the Bosporus? Constantinople is the capital of the Turkish Empire. It contains the beautiful palaces and gardens of the sultan, and many fine *mosques*, or Mohammedan churches; but most of the houses are miserable hovels built of wood, and in consequence widespread fires are common. The streets are narrow, filthy, and without sidewalks. The fine harbor is called the Golden Horn.

Roumania and much of Bulgaria lie in the fertile valley of the Danube, and from them great crops of grain are sent down the river for export. There are many vineyards and rose farms on the slopes of the Balkan Mountains, and wine and the famous perfume, attar of roses, are made there.

Constantinople.

The language of Roumania, unlike the languages of the neighboring countries of eastern Europe, is something like the Latin, and it is thought that many of the people now living there are the descendants of Roman colonists who settled in that region nearly two thousand years ago.

What is the capital of Roumania? of Bulgaria?

Servia and Montenegro are rough and mountainous, and are largely covered with forests. Corn forms the chief food of the people, and is grown in the river valleys. The wealth of the country consists in the herds of swine and cattle. What is the capital of each country?

Coffee Seller in Street of Constantinople.

Make a sketch map of Europe, showing the Balkan peninsula.

TOPICS ON THE BALKAN PENINSULA

I. Location and Surface.
II. The Turks. Character. Religion. Government.
III. States of the Peninsula. Names. Products.
IV. Constantinople. Location. Buildings. Streets.

CORRELATIONS AND COMPARISONS

Extent and Coast. — In what zones is Europe? What large country in America lies in the same parts of these zones as Europe? How does Europe compare with Canada in climate? Which is the larger, Europe or North America? About how much larger? (See tables near end of book.) What is the general shape of North America? of South America? of Europe? In what general direction does the greatest length of each of these land masses extend?

Compare the coast lines of North America, South America, and Europe. Which is the most irregular? Make a list of eleven seas, gulfs, and bays on the coast of Europe. Tell what country or countries of Europe border each of these. Are islands most numerous near the coast of North America, South America, or Europe? Make a list of six islands or island groups near the coast of Europe. Which is the most important? What strait and channel separate the British Isles from the mainland? What narrow waterway connects the Mediterranean Sea and the Atlantic Ocean?

Surface and Drainage. — In what general direction does the continental divide of North America extend? the continental divide of South America? the main divide of Europe? Does the continental divide of the Americas lie in the highlands or in the lowlands? How is it with the main divide of Europe? In what part of Europe are the great highlands? the great lowlands? Where are the great highlands and lowlands in the Americas located? In what part of Europe and in or between what countries are the Alps? the Caucasus Mountains? the Pyrenees? the Apennines? the Carpathian Mountains? the Ural Mountains?

What two rivers of Europe flow to the Caspian Sea? Name the three largest flowing to the Black Sea; one which flows east to the Adriatic; one which flows south to the Mediterranean. Name the two largest rivers of France flowing northwest. Name two rivers flowing to the North Sea; two flowing through Russia to the Baltic. What is the longest river of Europe? How does it compare in length with the Mississippi? What and where is the largest lake in Europe?

Products. — Sketch or trace a map of Europe, and write in the proper places the names of important products: grain, sugar beets, grapes, olives, flax; sheep and cattle, fish, raw silk; coal, iron, petroleum; manufactures. Make a list of articles manufactured in Europe. Name a raw material that is shipped from our Southern states to Europe. For what is it used?

People and Countries. — What people used to live in America before there were any white men here? Do you see more Indians or more white people here now? From what grand division did the white men come to America? Give some reasons why Europe should be specially interesting to the white people who live in America now. How does Europe compare in size with the United States? How does it compare with the United States in population? (See tables near end of book.) Which, then, has the denser population, Europe or the United States? How many states are there in the United States? How many countries are there in Europe? What language is generally spoken in all the states of the United States? How do the countries of Europe differ from our states in the matter of language? in the matter of government? What is the difference between a monarchy and a republic?

What powerful kingdom occupies the British Isles? Name four divisions of this island kingdom. What country on the mainland extends from the English Channel to the Mediterranean Sea? What two countries lie southwest of France? What two small countries are northeast of France on the North Sea coast? What country is east of the Netherlands, Belgium, and France? What small mountainous country is east of France and southwest of the German Empire? What small country is north of the German Empire between the North Sea and the Baltic? What two countries north of Denmark occupy a peninsula? What large country is south of the German Empire? What country south of Switzerland and Austria-Hungary occupies a peninsula? What country bordering the German Empire and Austria-Hungary occupies the eastern half of Europe? What three countries southwest of Russia border on the Black Sea? What two small countries lie between Turkey and Austria-Hungary? What country south of Turkey occupies a peninsula?

Make a list of these twenty countries of Europe and opposite each name write some fact concerning the people, industries, or products of that country. Tell which two countries are republics. Which part of Europe was the first to become civilized? What people spread civilization over much of Europe? What peoples brought civilization to America? What language is spoken in Brazil? in the rest of South America and in Mexico?

Cities. — Name the three largest cities of Europe in the order of their size. Give the location and some fact concerning each of the following cities: —

London	Paris	Berlin	St. Petersburg
Liverpool	Marseilles	Hamburg	Moscow
Glasgow	Rome	Vienna	Warsaw
Dublin	Naples	Copenhagen	Odessa
Madrid	Amsterdam	Christiania	Constantinople
Lisbon	Brussels	Stockholm	Athens

EURASIA
1000 MILES
Same scale as the maps of North America, South America, Africa, and Australia
Longitude 40 60 80 100 120 East from Greenwich
NORTH
SOUTH
WEST
EAST
ATLANTIC OCEAN
ARCTIC OCEAN
PACIFIC OCEAN
INDIAN OCEAN
EUROPEAN RUSSIA
SIBERIA
RUSSIAN EMPIRE
CHINESE EMPIRE
EMPIRE OF JAPAN
TURKISH EMPIRE
PERSIA
ARABIA
PENINSULA OF ARABIA
AFGHANISTAN
PLATEAU OF TIBET
HINDUSTAN
PLAINS OF INDIA
PLATEAU OF DEKKAN
INDIA
INDO-CHINA
FRANCE
GERMAN EMPIRE
AUSTRIA-HUNGARY
SWEDEN
NORWAY
BRITISH ISLES
SPAIN
PORTUGAL
ITALY
GREECE
TURKEY IN ASIA
RUSSIAN TURKESTAN
CHINESE TURKESTAN
MANCHURIA
MONGOLIA
KOREA
JAPAN
PHILIPPINE ISLANDS (to U.S.)
EAST INDIES
BORNEO
SUMATRA
CEYLON
NOVA ZEMBLA
SPITZBERGEN
FRANZ-JOSEF LAND
NEW SIBERIA IS.
WRANGELL I.
C. Chelyuskin
Lena R.
Yenisei R.
Ob R.
Irtish R.
Volga R.
Ural Mts.
Verkhoyansk Mts.
Stanovoi Mts.
Yablonoi Mts.
Khingan Mts.
Amur R.
Sea of Okhotsk
Kuril Is.
Sakhalin
Lake Baikal
Lake Balkash
Lake Aral
Altai Mts.
Caucasus Mts.
Hindu Kush Mts.
Himalaya Mts.
Kuen Lun Mts.
Tien Shan Mts.
Yangtze R.
Yellow R.
Yellow Sea
East China Sea
Formosa
Riu Kiu Is.
Hainan
Gulf of Siam
Mekong R.
Irrawaddy R.
Brahmaputra R.
Indus R.
Euphrates R.
Tigris R.
Nile R.
Red Sea
Persian Gulf
Gulf of Oman
Gulf of Aden
Arabian Sea
Bay of Bengal
Strait of Malacca
Strait of Sunda
Strait of Bab-el-Mandeb
Suez Canal
Black Sea
Caspian Sea
Aral Sea
Mediterranean Sea
Sea of Marmora
Aegean Sea
Crete
Cyprus
Tropic of Cancer
Equator
ST. PETERSBURG
MOSCOW
BERLIN
VIENNA
PARIS
LONDON
CONSTANTINOPLE
TEHERAN
DAMASCUS
JERUSALEM
CAIRO
MECCA
MEDINA
MASKAT
ADEN
TASHKEND
SAMARKAND
KABUL
HERAT
YARKAND
KASHGAR
TOBOLSK
EKATERINBURG
TOMSK
IRKUTSK
YAKUTSK
PEKING
TIENTSIN
SHANGHAI
NANKING
HANKOW
CANTON
HONGKONG
FUCHAU
TOKYO
YOKOHAMA
KIOTO
OSAKA
SEOUL
VLADIVOSTOK
BOMBAY
CALCUTTA
MADRAS
MANDALAY
RANGOON
BANGKOK
SAIGON
CAMBODIA
HUE
HANOI
MANILA
SINGAPORE
COLOMBO
C. Comorin
Brahmaputra
Lassa
Shelat
Maskat
Aden
Mecca
Medina
Cairo
Jerusalem
Damascus
Baghdad
Mosul
Tabriz
Erzerum
Smyrna
Asia Minor
Mt. Sinai
Nile
Suez
Red Sea
Persian Gulf
Gulf of Oman
Gulf of Aden
Arabian Sea
Indian Ocean
Bay of Bengal
Strait of Malacca
Strait of Sunda
Strait of Bab-el-Mandeb
Suez Canal
Black Sea
Caspian Sea
Aral Sea
Mediterranean Sea
Sea of Marmora
Aegean Sea
Crete
Cyprus
Tropic of Cancer
Equator
F.V. FARQUHAR, CLE.
L.L. POATES, ENGR., N.Y.

ASIA

POSITION AND COAST

Name the mountains, river, and seas which separate Asia from Europe. (See political map of Europe.) In what zones is Asia? In what zone is the greater part? What ocean is north of Asia? What ocean is east? What strait separates Asia from North America? What ocean is south of Asia? What two seas are west of southwestern Asia? What isthmus connects Asia with Africa? Name the strait through which the Red Sea opens.

Asia includes more than three fourths of the grand division of Eurasia. It is larger than North and South America combined, and contains about one third of the land surface of the world.

The eastern and southern coast lines are very irregular. What great bay and sea are south of Asia? What gulf extends northwest from the Arabian Sea? Name six seas that wash the eastern shores of Asia. How are most of them partly separated from the Pacific Ocean? Name two peninsulas of eastern Asia. Name three peninsulas of southern Asia.

On which side of Asia are there many islands? What island is crossed by the Tropic of Cancer? What group of large islands is northeast of Formosa? What group of islands is south of Formosa? Where are the islands of Sumatra, Borneo, and Celebes?

Many of the islands east and southeast of Asia contain volcanoes, from which terrible outbursts of steam and lava sometimes occur.

Practice making a sketch map of Asia.

TOPICS ON POSITION AND COAST OF ASIA

I. Location and Size.
II. Each Coast Line. General direction. Projections. Indentations. Islands.

SURFACE

(*See Relief Map of Eurasia.*)

Which part of Asia is mostly lowland? Which part is mainly highland? Find the Pamir plateau in the highland region. What plateau is southeast of the Pamir? What plateau is southwest? What plateau is southwest of the plateau of Iran? What mountains are south of the plateau of Tibet? What plateau is south of the Himalaya Mountains?

From the Pamir plateau a succession of mountain ranges stretches westward to the Black Sea, and two chains extend eastward — one to the northeast and one to the east.

What is the westward range called, east of the Caspian Sea? south of the Caspian Sea? between the Caspian and the Black Sea? From these ranges the low plateau of Iran extends southward nearly to the coast. The lowlands about the Persian Gulf separate the plateau of Iran from another low plateau which occupies most of the peninsula of Arabia. What plateau is south of the Black Sea?

The mountains northeast of the Pamir plateau consist of many ranges; name three of them. The Kuenlun range extends eastward from the Pamir plateau, along the border of the plateau of Tibet. The Himalayas, on the southern border of Tibet, are the loftiest range of mountains in the world. Mount Everest, their highest peak, is over five miles high.

GROUP OF TIBETANS.

The plateau of Tibet is one of the highest plateaus in the world. It is more than twice as high as the western highland of the United States, and almost as large. What desert is between the Kuenlun and the Altai Mountains? It is a low, dry plateau. The plateau of Tibet also is dry, but being much higher is much colder than the Desert of Gobi.

These dry plateaus produce little vegetation except coarse grass; and the herding of sheep, goats, camels, and yaks is the chief occupation. The yak is an animal much like the ox, but has long hair.

The highlands are so broad and the mountains so lofty that they form a nearly impassable barrier between northern and southern Asia.

Like the peninsulas of Europe, the Asian peninsulas are either mountainous plateaus or spurs from the Eurasian highland.

The islands off the east coast of Asia are also really mountain ranges, the valleys between being covered by the ocean, and forming partly inclosed seas.

Northern Asia is a great lowland plain much like northern Europe. Along the Arctic Ocean is a frozen, moss-grown tundra; farther inland there are extensive forests; still farther south are open prairies, and in the southwest are dry steppes, covered with coarse grass.

Among the eastern and southern highlands are many broad lowland plains. Such are the plains of the Hoang, the Ganges, and the Indus rivers.

Model Asia; show mountains, plateaus, and lowlands.

TOPICS ON SURFACE OF ASIA

I. HIGHLANDS. General direction. Plateaus: Pamir; Tibet; Gobi; Iran; Asia Minor; Arabia; Dekkan. Mountains: Himalaya; Kuenlun; Thian Shan; Hindu Kush. Peninsulas.

II. LOWLANDS. Siberian plain. Plains of China. Plains of India.

THE YAK IS SOMETHING LIKE AN OX.

DRAINAGE

Name the three large rivers in the Siberian plain. In what direction do they flow? These rivers have branches flowing nearly east or west, and with head waters so near each other that it is only a short distance across the divides. The hunters and fur traders go from Russia far into this plain by means of these rivers.

Name four large rivers of the Pacific slope. The Amur flows through a fine grain-growing region. The Hoang, or Yellow River, is sometimes called "China's Sorrow," because of the loss of life and property caused by its overflows. The Yangtze and the Mekong rise in the high plateau of Tibet, and descend to the lowlands in deep gorges or canyons, through which few white men have ever passed.

What two rivers flow into the Bay of Bengal through the same delta? (See political map of Eurasia.) What river flows into the Arabian Sea? These three rivers drain both the north slope and the south slope of the Himalaya Mountains. What rivers drain into the Persian Gulf?

Beginning at the Ural Mountains, draw a line around the great region whose rivers do not reach the ocean. Much of this large interior basin is very dry, but it contains several lakes which have no outlets and are therefore salt. The Caspian Sea and Lakes Aral and Balkash are the largest of these. What rivers flow into Lake Aral?

There are fewer fresh-water lakes in Asia than in North America. The only large one, Lake Baikal, is about half as large as Lake Superior. What river is its outlet? Much trade is carried on across this lake by means of steamboats during summer, and by ice sleds in winter.

Sketch Asia; locate its large rivers.

TOPICS ON DRAINAGE OF ASIA

I. Northern Slope. Ob; Yenisei; Lena.
II. Eastern Slope. Amur; Hoang; Yangtze; Mekong.
III. Southern Slope. Brahmaputra; Ganges; Indus; Tigris and Euphrates.
IV. Lakes.

PEOPLE

What part of Asia is most thickly peopled? What parts of Asia contain very few people? Can you think of reasons why few people live in northern and central Asia?

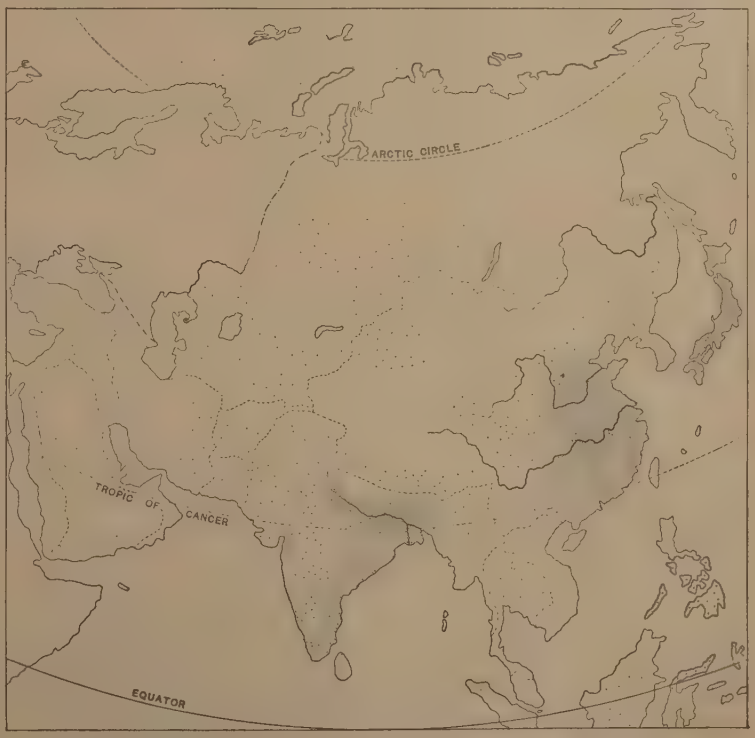
Southern Asia has a warm, moist climate, and food plants grow there in abundance. Nearly half the people of the world live in this part of Asia. In the parts of Asia that are too cold or too dry for food plants to thrive, few people are found.

In Asia, even more than in Europe, the people in the various countries differ in language, in religion, and in manners and customs. There are three different races of people in Asia.

The people of the yellow race live mainly in the eastern and northern parts of Asia. How do they differ from people of the white race? What people of the yellow race live in Europe?

The people of the brown race live mainly in the islands southeast of Asia, and in the Malay peninsula. Many of them are still savages, but some are civilized.

Most of the people of India and of southwestern Asia belong to the white race, though



The Dots show where Most of the People in Asia live.

they have darker skin than the people of Europe. It is believed by many that originally the Caucasian or white race lived in the highland region in the neighborhood of the Hindu Kush Mountains, and that from this region they spread southeastward into India, and westward into the various countries of Europe.

TOPICS ON PEOPLE OF ASIA

I. Distribution. Northern plain. Plateau and desert belt. Southeastern lowlands.
II. Races. Caucasian. Mongolian. Malay.

RUSSIAN ASIA

Which part of Asia belongs to the Russian Empire? In what zones is it? What waters are north of Siberia? What waters are east? From what division of North America is it separated by Bering Strait? Describe the surface of Siberia; the drainage.

Russian Asia includes the whole of the northern lowland, and extends eastward across the highland region to the Pacific Ocean. This vast region is nearly as large as Canada and the United States combined. It is very thinly peopled, however, and nearly all of the people live near the southern border. Most of the northern part of the region is called Siberia, and much of the southwestern part is called Russian Turkestan.

In the cold northern part of Siberia the only inhabitants are a few tribes of ignorant natives of the yellow race, who obtain their food chiefly by hunting.

Siberian Peasants.

Gateway to Ameer's Palace, Bokhara.

Central Siberia also is very cold, but like central Russia and central Canada it is covered with extensive forests. In this region, the native tribes are engaged in trapping wild animals for their valuable furs, which are bought by fur traders and sent to European Russia.

In southern Siberia, south of the forest region, a railroad has been built from European Russia, through Tomsk and Irkutsk, to Vladivostok on the Sea of Japan, and to Peking in China. This is the part of Siberia where most of the people live; for, like southern Canada, it is warm enough for wheat and vegetables to grow. Many farmers and traders from European Russia have settled in this region, and many towns are springing up along the railway. In the larger towns there are electric lights, street cars, libraries, schools, and colleges much as in our own cities.

The mines of the Ural Mountains and of eastern Siberia are the chief wealth of the country. They yield gold, silver, iron, coal, and other minerals. They are worked largely by Russian criminals who are sent to Siberia as a punishment.

Turkestan is very dry. The herding of horses, camels, cattle, and sheep is a leading industry, but grain, cotton, sugar cane, and fruit are grown where land can be irrigated.

Khiva and Bokhara are native states which really belong to Russia.

Find Tashkend. It is the largest city of Russian Turkestan. Coarse cotton cloth and leather goods are made in the towns and villages near by. Where is Irkutsk? It is the chief market of eastern Siberia. Find Vladivostok. It is the great seaport of the Russian Empire on the Pacific Ocean.

Sketch Asia; locate Siberia.

THE CHINESE DRESS IN LOOSE ROBES.

TOPICS ON RUSSIAN ASIA

I. LOCATION AND SURFACE.
II. SIZE AND POPULATION.
III. INDUSTRIES AND PRODUCTIONS.
IV. CITIES.

THE CHINESE EMPIRE

In what part of Asia is the Chinese Empire? In what zone is most of it? The empire is divided into China proper, Manchuria, Mongolia, Chinese Turkestan, and Tibet. Which two divisions lie largely in the lowlands? What two rivers drain the greater part of China proper? Where do they rise? Into what waters do they flow? Of what ocean are these waters a part? The Hoang River has a great delta.

The Chinese Empire is somewhat larger than the United States, and is the home of the greater part of the yellow race. Mongolia, Chinese Turkestan, and Tibet lie on the plateau and desert region of central Asia, and cover the largest part of the empire, but contain few people. The fertile and thickly settled lowlands of China proper contain nearly one fourth of all the people in the world.

China is one of the oldest of nations. The Chinese printed books and made gunpowder long before these inventions were known in Europe; yet they have made little progress, and live very much as their ancestors did thousands of years ago. They have very little machinery, and what they have is awkward and old-fashioned.

Until a few years ago the Chinese were not allowed to leave their country, nor were strangers allowed to visit it; and even now few strangers travel far into China.

The Chinese dress in loose robes or jackets, with full sleeves, which they use as pockets. Their shoes have thick white soles. They shave off their hair except a lock on the crown, which they wear in a long braid. Many Chinese ladies can not walk well, because when they were young their feet were bandaged to prevent them from growing. Thus their feet are terribly deformed.

The Chinese are very polite to one another. Even after he has grown up, a Chinaman obeys his parents while they are alive and

CHINESE LADIES.

worships them after they are dead. Although the Chinese seem stupid in not adopting new ways, they are very clever in doing things in their old-fashioned ways, and they are very industrious.

In China proper, farming is the chief occupation. Almost every foot of the land is cultivated, and along the rivers great rafts made of a kind of tall reed or cane, called *bamboo*, are covered with earth and used as gardens. Many thousands of people live on these rafts and on flatboats which are moored with them.

The hill slopes are terraced, and on them tea and many fruits and vegetables are raised, but in the lowlands rice and other grains are the chief crops. The rice is grown on land that can be easily flooded, and thousands of men and women may sometimes be seen wading in the rice fields, tending their crops.

Tea is the leaf of a shrub about four feet high. The leaves are picked three or four times a year. They are heated in shallow pans, rolled with the hands upon a table, and then dried in sieves over charcoal fires. Quantities of an inferior kind are pressed into "bricks." Much tea is shipped in lead-lined boxes to England and America. Much also is sent overland through Asiatic Russia into Europe.

The Chinese eat very little beef or mutton, but every hut has its pig, ducks, geese, and chickens. Fish cooked in lard or in castor oil is much used for food; but the chief food in China consists of rice and tea.

CHINESE PICKING TEA.

Famines often occur in China, and sometimes thousands of people starve to death. This is because, when the crops fail in one part of the country, food can not be quickly brought from other regions, for there are not many railroads or good roads, and but few horses and wagons. In much of China almost all the merchandise is carried on the backs of men, or on rude wheelbarrows, or on the rivers or canals in boats called *junks*.

CHINESE WHEELBARROWS.

The Chinese make many excellent and beautiful things, but mostly by hand. The best pottery and porcelain used to come from China, and to this day we call it *china ware*, even though it is made in the United States. The Chinese generally dress in cotton cloth made in China. It was from the Chinese that the world learned to make silk cloth, and much of the finest and softest silk still comes from China; but most of the silk exported from China is raw silk, which is manufactured into cloth, ribbon, or thread in Europe or America.

Manchuria is crossed by the Khinghan Mountains, but there are many wide and

fertile plains, in which much wheat is raised. Mongolia and Chinese Turkestan are mostly desert or arid lands, where the chief industry is the herding of horses, cattle, and camels. Mongolia used to be the home of robbers, and long ago one of the emperors of China built a wall twelve hundred miles long to protect his

STREET IN PEKING.

people from them. Much of this wall is still standing. The high, cold plateau of Tibet has seldom been visited by white men.

Find Peking. It is the capital of the Chinese Empire. Where is Canton? It is one of the largest of the many large cities of China. Find Shanghai. It is the greatest seaport of China and one of the few Chinese cities where foreigners are allowed to live.

Hongkong, a small island near the coast, belongs to Great Britain. Many foreign merchants live there in order to trade with China.

When, a few years ago, Chinamen were first permitted to leave China, many came to our Pacific states as laborers. Now, however, the laws of our country do not permit Chinese laborers to come to the United States.

Sketch Asia, showing the Chinese Empire.

TOPICS ON THE CHINESE EMPIRE

I. LOCATION, SIZE, AND CLIMATE. Divisions.
II. SURFACE. Plateaus and deserts. Fertile plains.
III. PRODUCTS. Rice. Tea.
IV. TRANSPORTATION.
V. PEOPLE. Race. Food. Handiwork. Cities.

A VOLCANO IN JAPAN.

JAPAN AND KOREA

What island empire is east of China? In what zone are most of these islands? What is the name of the largest island? Hondo is a little larger than Kansas. What is the name of the large island at the south end of the group? What sea lies between Hondo and the mainland? What ocean is east of these islands?

The Japanese islands are mountainous, and the scenery is very beautiful. There are many volcanoes and hot springs among the mountains, and earthquakes are frequent. The summers are warm and moist, but the winters are quite cold.

It is only in recent years that the Japanese have allowed vessels from all nations to visit their seaports. Since foreigners were admitted, Japan has made wonderful progress. Railways and telegraph lines have been built; good roads have been made; daily newspapers are published; a university has been established; and every town and village has its schools. The Japanese are the most progressive and civilized native people of Asia. They have been called the "Yankees of the East" because they are so clever and energetic.

The Japanese look somewhat like the Chinese, to whom they are related. The men are short but sturdy; the women, small and slight.

The houses are made of wood, with sliding walls in front which are pushed aside during

the day, showing the whole interior. Dressed in his long, loose gown with flowing sleeves, the Japanese squats upon the floor and sells his goods, using the floor as a counter. He

JAPANESE COOPER.

eats his meals from a tiny table. He manufactures by hand — sometimes by foot also, for his toes are almost as useful as his fingers. His wife squats near him, dressing her hair, or playing a kind of guitar, or boiling the rice for his dinner, while the children run about at play, the older one with the baby strapped to his back. At night the family close the sliding walls, and, after taking a hot water bath, pull out of the closets the quilts which serve as beds, and go to sleep on the floor, their heads or necks resting on little padded wooden stools. The food of the poorer people consists chiefly of rice, fish, radishes, and tea.

The Japanese, like the Chinese, raise silkworms and a great deal of tea. The camphor tree, and the tree from which is obtained the gum used in making lacquer varnish, grow on the mountain slopes. The Japanese are very fond of flowers; they call their country the "Land of the Chrysanthemum," and have festivals in spring in honor of the cherry blossom. Their small farms have no fences, for there are few cattle and fewer horses. In the cities passengers travel about the streets in little two-wheeled carriages called *jinrikishas*, drawn by men.

JAPANESE BED.

Almost everything made in Europe and America is manufactured also in Japan. Japanese silk, cotton yarn, coal, and tea are exported. The largest share of the exports of Japan is sent to the United States; but the imports come largely from Great Britain.

Steamship lines connect Japan with San Francisco, Seattle, and the chief ports of Europe and Asia. Yokohama is the chief seaport of foreign trade. Where is Tokyo? It is the capital. Its recent growth has been even more rapid than that of Chicago.

It was an American who first induced the Japanese to trade with the rest of the world, and many young Japanese attend our schools and colleges.

What is the name of the peninsula between the Japan Sea and the Yellow Sea? Korea is a separate monarchy, but it is largely controlled by Japan. Agriculture is the chief industry, and rice, wheat, and beans are grown. Like Japan and China, Korea, until recently, has had very little to do with the outside world. What is the capital of Korea?

Sketch Asia; locate Japan and Korea.

TOPICS ON JAPAN

I. LOCATION.
II. PRODUCTIONS. Agricultural. Manufactured.
III. PEOPLE. Appearance. Food. Houses. Progress.
IV. CITIES.

INDIA

Name the middle peninsula of southern Asia. What country includes this peninsula? In what zones is India? What mountains are north? What waters are east? west? What island is south? Describe the surface of India; the drainage.

India is not so large as the United States, but it contains nearly four times as many people. The southern half of India lies in the torrid zone, and nearly the whole country is very warm. During the summer months the winds blow from the sea and bring heavy rains, but during the winter months dry northerly winds prevail. These seasonal winds are called *monsoons*, a word which means "season."

The great glaciers of the lofty Himalayas get their snow from the southwest monsoon. The lower slopes of the mountains are covered by forests; at their foot are dense thickets called *jungles*. The river plains of northern India are the most fertile lands of the country.

In the jungles are many wild animals — the tiger, the leopard, the elephant, the rhinoceros, and the hyena. The elephant is trained to carry heavy burdens and to drag timbers. The buffalo also is found, and the forests abound with monkeys and birds. The cobra of India is the most poisonous snake known.

Most of the domestic animals with which we are familiar — the horse, ox, sheep, dog, cat, hog, and chicken — came originally from this part of Asia, accompanying the white people to Europe, and from Europe to America. Many of our grains, fruits, and vegetables also came originally from this region.

India is thickly inhabited by people of different races and religions. The greater part are Hindus, who belong to the white race. They are divided into classes, called *castes*, which never mingle with one another. The priests, or Brahmans, are the highest caste. They have very old books filled with poetry and stories of their gods. People of the lowest caste are very poor. They wear only a strip of cloth about the hips, with perhaps another tied around the shoulders; they sleep in mean huts on short rope beds, and live on rice and water, with an occasional piece of fish. The women of the lower classes work in the fields, the mother with her baby on her back or astride of her hip.

India, like China, has been civilized much longer than Europe. It used to be composed of many native kingdoms. Most of the cities of India were founded long before Europeans visited the country. Many of them contain magnificent marble palaces, temples, and tombs, built by the native kings.

ELEPHANTS WORKING.

MARBLE TOMB AT DELHI.

Weighing Tea, India.

About a hundred and fifty years ago the English began to conquer these Indian kingdoms, and now Great Britain controls nearly the whole of India and sends a viceroy there to govern it.

Agriculture is the chief occupation in India. In the fertile Ganges valley there are many irrigating canals, and in the Dekkan plateau are large tanks to store the water which falls during the wet season.

Rice, peas, and millet, a grain like corn, are the chief food of the people. Wheat and tea also are grown; and much tea and some wheat are sent to Europe. The poppy is cultivated for the opium made from its juice.

Much flax is grown for the seed, from which linseed oil is pressed. We use this kind of oil in mixing paints. Cotton, jute, and silk are produced. Part of the cotton is sent to England, where it is made into cloth, much of which is sent back to India. The jute is used in making coarse bags and rope.

The Hindus manufacture fine shawls, carpets, and rugs, and such delicate cotton cloth that they call it "woven wind." They also make fine gold embroidery thread, and beautiful jewelry. They have some modern factories, but most of their factory-made goods come from Europe.

The Ganges valley has many railroads, and narrow-gauge railroads lead to some of the "hill stations," as English towns in the mountains are called.

Where is Calcutta? It is the capital and leading seaport. What port is on the west coast? It has a good harbor, and is connected with Calcutta by a railway. Where is Madras? It also is a market and seaport.

What city is in the island of Ceylon? It exports tea and cocoanut oil to England.

What fortress in the Spanish peninsula do the British own? They also control the Suez Canal. What town is on the Gulf of Aden

Temples on the Ganges.

near the mouth of the Red Sea? The British own this town also. All these possessions make it possible for Great Britain to control the route of vessels plying between England and India.

India is our rival as a cotton- and wheat-producing country, for her products are sold to the English, who are our chief customers.

Sketch Asia; locate India.

TOPICS ON INDIA

I. Position and Extent.
II. Surface. Plains. Plateau.
III. Climate and Rainfall.
IV. Industries and Products.
V. People. Numbers. Classes. Government.
VI. Cities. Calcutta. Bombay. Madras.

SOUTHWESTERN ASIA

What five countries are in southern Asia west of India? Which has no seacoast? What sea is north of Persia? What gulf is south? What empire owns the western part of the Arabian plateau? What three seas border Asiatic Turkey? What waters wash the shores of the Arabian peninsula? Describe the surface of southwestern Asia; its drainage.

Southwestern Asia is mostly a plateau, crossed and bordered by mountain ranges. The only lowlands are the narrow coast plains and the broad valley of the Tigris and Euphrates rivers.

The coast lowlands have a warm climate and enough rain to produce good crops of grain, tobacco, grapes, figs, dates, and other fruits.

The winds lose most of their moisture on the mountain slopes rising from the coasts, and the interior plateaus are too dry for farming. Large parts of these plateaus are deserts, hot in summer and very cold in winter. Elsewhere the scanty vegetation affords pasturage, and the herding of horses, camels, sheep, and goats is a leading industry. Rugs and cloth are woven on hand looms and exported.

CAMELS IN THE PERSIAN DESERT.

The camel is of great importance in the desert country, for it can travel long distances without food or drink. It is often called "the ship of the desert." A troop of camels, conducted by a company, or *caravan*, of merchants, will sometimes carry loads of merchandise a distance of several thousand miles.

Excepting the Turks, who belong to the yellow race, the people of southwestern Asia belong to the white race. They are generally employed in herding, trading, and rug weaving.

Afghanistan and Baluchistan are small, mountainous states, through which caravan routes lead into India. Baluchistan belongs to Great Britain.

WEAVING A PERSIAN RUG.

The Persians are noted for the silks, rugs, and fine shawls which they weave by hand. Name the capital of Persia.

The Arabs of the plateau of Arabia are closely related to the Jews, whose history is contained in the Old Testament. Most of the Arabs are wandering herdsmen, each tribe being governed by a chief called a *sheik*. The most flourishing Arabian state is Oman, in the southeast.

ARAB ENCAMPMENT.

More than half the people of southwestern Asia are in the Turkish Empire. Along the coasts of the Mediterranean and Black seas there is much fertile land, and much farming is done. On the slopes east of the Red Sea fine Mocha coffee is grown. Turkish rugs are highly prized all over the world.

The Turks and Arabs are believers in the religion of Mohammed. There are also many Christians in Turkey, but they are hated and persecuted by the Turks.

Find Jerusalem. It was once the capital of the Jewish nation, and is famous for many of the scenes in the life of Jesus. Find Smyrna. It is a noted seaport. Damascus is one of the oldest cities in the world. The cloth called *damask* is still made in this city.

Make a sketch map of Asia, showing the five southwestern countries.

TOPICS ON SOUTHWESTERN ASIA

I. PHYSICAL. Surface. Coast. Climate.
II. POLITICAL. Countries. Chief cities.
III. INDUSTRIAL. Occupations. Products. Trade.

SOUTHEASTERN ASIA

Where is Indo-China? What bay is west? What sea is east? What gulf opens into this sea? What peninsula is in the south? What island is southwest? What strait separates the peninsula from the island?

TEMPLE AT BANGKOK.

A PHILIPPINE COUNTRY HOME.

Indo-China is crossed by several mountain ranges extending north and south and separated by wide valleys. The climate is hot and moist, and much of the country is covered by dense forests. Rice is extensively cultivated in the river valleys.

Most of the people of Indo-China belong to the yellow race, but in the southern part there are many Malays.

Burma, in the west, is part of India. Rice and lumber are exported. Name two Burmese cities.

Siam is an independent native kingdom. The country is sometimes called the "Land of the White Elephant," for white elephants are held so sacred there that they are treated as if they were kings. Most of the trade is in the hands of European and Chinese merchants. Teak, a hard wood used in shipbuilding, comes from the forests. Precious stones are found in Siam. Where is Bangkok, the capital?

Anam and Cambodia are French possessions. Much of the trade is with France. Rice, sugar, and raw silk are exported.

The Malay peninsula contains a British colony in the southern part, and several small native states. Tin, gutta-percha, and spices are the chief products. About two thirds of the tin used in the world is mined in this neighborhood and shipped from Singapore to Europe and America.

The islands southeast of Asia are often called the East Indies. Borneo, New Guinea, and Sumatra are among the largest islands in the world. (See political map of Australia.) All the East Indies are covered with tropical vegetation, and inhabited chiefly by Malay tribes.

The Philippine Islands belong to the United States, and produce tobacco, sugar, and Manila hemp, which is used in making ropes. Manila is the chief city. The rest of the East Indies belong mostly to the Netherlands. Sugar, coffee, tobacco, spices, and tin are the chief products. Java is the most important island, and contains Batavia, the capital of the Dutch East Indies. The small islands of Banka and Billiton, near Sumatra, are noted for their tin mines.

TOPICS ON SOUTHEASTERN ASIA

I. PHYSICAL. Surface features. Coast. Climate. Neighboring islands.
II. POLITICAL. Native races. European owners.
III. INDUSTRIAL. Productions.

CORRELATIONS AND COMPARISONS

Extent and Coast. — In what zones is Asia? What part of America lies in the same zone as the greater part of Asia? (See map of the zones.) What parts of America and Asia lie in the north half of the torrid zone? How does the size of Asia compare with that of North and South America combined? (See tables near end of book.) Which coast of Asia is least irregular? Which coast is bordered by the greatest number of islands? Which are the most important of these islands? Name six great seas on the east coast. Of what ocean do these seas form a part? Name a bay, two gulfs, and a sea on the south coast. Into what ocean do they open? What four seas border the western part of Asia? With what oceans are they connected?

Surface and Drainage. — What parts of Asia are mostly highland? What part is mostly lowland? Name six plateaus of Asia. How does the plateau of Tibet compare with the western highland of the United States in size and in elevation? In or between what countries are the following mountain ranges: Thian Shan? Altai? Khinghan? Stanovoi? Kuenlun? Himalaya? Hindu Kush? Name three lowland plains of Asia. Which of them is the largest? Which of them has the smallest number of inhabitants? Mention some reasons why the two smaller lowlands are better fitted for a dense population than the great Siberian lowland. Why is much of the great highland not well suited for a dense population?

Name three great rivers of the northern slope of Asia; four of the east slope; two of the south slope which flow into the Bay of Bengal through the same delta; one river which flows into the Arabian Sea; two which drain into the Persian Gulf. Name three lakes or seas of Asia which have no outlet. What rivers flow into Lake Aral?

Products. — Sketch or trace a map of Asia, and write in the proper places the names of important products: rice, wheat, tea, cotton; silk, furs, camels, yaks, elephants; coal, tin.

By what two routes may tea be shipped from China to the United States? By what routes may tea be sent from China to western Europe? Name a country in Europe where silk is manufactured; one in America. From whom did the Europeans learn to make silk? What raw material is shipped from India to England? What other country produces the same kind of raw material?

People and Countries. — What three races have their home in Asia? What part of Asia is the home of each? What two countries on the mainland and what island empire contain most of the people of Asia? What are the five divisions of the Chinese Empire? What country occupies a peninsula between China and Japan? Tell some facts about the people, industries, products, and government of Japan; China; India. Name, locate, and tell some fact about the countries of Indo-China; about the islands of the East Indies; about the five countries of southwestern Asia. Name two divisions of Russian Asia and tell something about each. Compare the Chinese Empire with the United States in size and in population.

Cities. — Give the location and some fact concerning each of the following cities: —

Tokyo	Canton	Calcutta	Jerusalem
Yo kohama	Manila	Madras	Smyrna
Peking	Batavia	Bombay	Tashkend
Shanghai	Singapore	Teheran	Irkutsk

AFRICA

AFRICA. (Same scale as maps of North America, South America, Eurasia, and Australia.)

POSITION AND COAST LINE

Compare this map of Africa with those of North America and of Eurasia. How does Africa compare with those grand divisions in size? What sea is north of Africa? What ocean and gulf are west? What sea, gulf, and ocean are east of Africa? By what isthmus is Africa joined to Asia?

What part of Africa is crossed by the equator? In what zones is Africa? It is the hottest of all the grand divisions.

Which has the greater number of bays and peninsulas — Africa or Eurasia? Africa or North America?

Columbus was searching for a western route to India when he discovered America. At that time Portuguese sailors were hunting for an eastern route to India. When they discovered and passed the cape near the southern end of Africa, the king of Portugal named it Good Hope, because he believed that the route to India had been found. What shorter water route is there from Europe to India?

What large island is east of Africa? How is it separated from the mainland? Name three groups of islands west of Africa. There are active volcanoes on the Canary Islands and the Cape Verde Islands, and the Madeira Islands are composed of old volcanic rocks. Canary birds are named from the Canary Islands, where they are found.

Practice making a sketch map of Africa.

TOPICS ON POSITION AND COAST LINE OF AFRICA

I. LOCATION. Waters surrounding. Circles crossing.

II. SHAPE. Its length and its breadth. Its three coast lines. Its outline. Islands near.

III. SIZE. Comparison: with Eurasia; with North America.

RELIEF AND DRAINAGE

Trace the divide between the Indian Ocean slope and the Atlantic slope of Africa. On which side of the divide is the longer slope? What four rivers are on the longer slope? To what ocean do they flow? What river is on the shorter slope of Africa? To what ocean does it flow?

Southern Africa is a great plateau, from which long arms of highland extend far northward along the east and west coasts. From the edge of these highlands the surface slopes steeply down to the narrow plains which fringe the coasts of southern Africa. In the southeast the edge of the plateau forms a well-marked mountain range. What is its name?

NATIVES AND BOATS IN THE SUDAN.

Where is the highland of Abyssinia? This is a lofty plateau with a climate much cooler than that of the surrounding parts of the grand division. Name two mountain peaks south of this plateau. They are the highest points in Africa.

Northern and central Africa is mostly a vast lowland region. But this lowland is bordered on the northwest by a high mountain chain. What is its name?

In the central part of Africa, on each side of the equator, is a broad, fertile belt of land which has a very heavy rainfall. North of the equator this region is called the Sudan. In what part of Africa are most of the lakes? Name one lake north of the equator; three lakes south of the equator. Lake Victoria is about as large as Lake Superior in North America. What large river system lies within this moist equatorial region? What large lake is in the Kongo basin? What large river is

in the western Sudan? Into what gulf does it flow?

The region north of the Sudan is very dry. What is it called? The name *Sahara* means "the desert." The Sahara extends from the Atlantic Ocean to the Red Sea, and is the largest desert in the world. Its surface is low and sandy in some places, and rugged and rocky in others. In what direction do the mountains which cross it extend? What large river crosses the Sahara to the Mediterranean Sea? Next to the Mississippi-Missouri, the Nile is the longest river in the world. In what lake does it rise?

SCENE IN THE SAHARA.

Much of southern Africa between the Zambezi and Orange rivers is also very dry. Where does the Orange River rise? Into what does it flow? To what ocean does the Zambezi flow? What lake is in the basin of this river?

Nearly all the large rivers of Africa have rapids or falls where they flow from the plateau to the low coast plains. Steamboats can ascend the Nile to the first cataract,—about eight hundred miles,—but in the Kongo the rapids begin a little over a hundred miles from the sea. The falls of the Zambezi River are among the grandest in the world. Below these falls the river flows for a long distance at the bottom of a deep, narrow, and steep-sided canyon in the plateau.

Practice a sketch map of Africa. Show its chief mountains and rivers.

VICTORIA FALL ON THE ZAMBEZI.

TOPICS ON RELIEF AND DRAINAGE OF AFRICA

I. SURFACE. General elevation: in north; in south. Mountain border. Coast plains.
II. REGIONS. The Sahara. The Sudan.
III. RIVERS. The Nile. The Kongo. The Niger. The Zambezi.
IV. LAKES.

PEOPLE

Africa contains more inhabitants than North America, and about two thirds of them belong to the black or negro race. The home of the negro is the region south of the Sahara.

The black men in America have become civilized by living with the white people, but in Africa most of the negroes are uncivilized and are frequently at war. Many of the tribes, however, raise corn and other grain to feed to their herds of cattle, and some of them have learned to make cloth and leather.

Most of the negro tribes live in villages, some of which contain hundreds of low huts. The negroes are fond of dancing and of music that is often harsh and disagreeable

NEGRO GIRLS WITH BEAD ORNAMENTS.

to white people. Some tribes are so fond of ornaments that it is common to see a negro with his nostrils or lips pierced and ornaments fastened in the holes. Many of them grease and paint their bodies, and wear little or no clothing.

The northern coast of Africa is more like the neighboring countries of Europe than like central Africa, from which it is separated by the Sahara, or Great Desert. Its people are mainly Berbers and Arabs; they belong to the white race, but, like the Turks, they believe in the Mohammedan religion. Some of the Berbers are civilized, but many are half civilized, with no fixed homes. They wander about the country with their herds of cattle and camels, sometimes plundering caravans.

The Berbers once occupied all the country from the Red Sea to the Atlantic Ocean, but about a thousand years ago Arabs came over from southwestern Asia, and their descendants are to-day the traders of northern Africa. The Arabs wear flowing robes and turbans, and are among the finest horsemen in the world. Nearly all the trade between the interior and the coast is by means of Arab caravans.

ARABS WEAR FLOWING ROBES AND TURBANS.

In southern Africa and along the coast are European colonies.

Sketch Africa, showing where the negroes, Berbers and Arabs, and European colonists live.

TOPICS ON PEOPLE OF AFRICA

I. INHABITANTS. Number. Races.
II. NEGROES. Home. Appearance. Civilization.
III. BERBERS AND ARABS.
IV. EUROPEAN COLONISTS.

INDUSTRIES

The industries of the northern coast of Africa, like the people, are similar to those across the Mediterranean Sea. But central Africa is so hot and wet, its coasts are so unhealthful, and its interior is so difficult to reach, that only recently has it been explored by Europeans. Its products are very different from those of the other grand divisions.

The people from the Mediterranean coast can not easily cross the Great Desert to the south. It is only by means of camels that the Sahara can be traversed. But these animals are constantly crossing the Sahara into the Sudan, carrying salt, cloth, knives, and trinkets. These are traded to the natives of the interior for ivory and slaves, mainly, but also for gold dust and ostrich feathers, which are brought back to the markets near the coast.

Elephants are found all over the great central region of Africa, and are being killed off for their ivory tusks. Ivory is a valuable product of Africa, and much of it is exported every year. For what is ivory used?

Slavery still exists in some parts of Africa, in parts of Asia, and in European Turkey. In the rest of Europe and in America it is no longer permitted. Thousands of men, women, and children in central Africa have been torn from their families and sold into slavery. Many slaves are still driven across the Sahara, or to the east or west coast, to be sold, but the slave trade is rapidly decreasing.

Few animals live in the Sahara, but one of them is the ostrich, a huge bird that stands about seven feet high. The ostrich does not

An Ostrich Farm in South Africa.

fly, but it is so swift a runner that a horse can hardly overtake it. Its feathers are used as ornaments. In the Sahara the ostrich is wild, but in southern Africa there are many ostrich farms. Great care is given to the raising of young birds, and the plumes are carefully cut each season. These ostrich farms furnish most of the world's supply.

Gold is found in many parts of Africa, and has had much to do with its settlement. Until gold was found in California most of the coin of Europe was made of gold from the west coast of Africa. There are now rich gold and diamond mines in southern Africa.

Sketch a map of Africa, showing where ivory, gold, and the ostrich are found.

TOPICS ON AFRICAN PRODUCTS

I. Ivory. What it is. How obtained. Use.
II. Slaves. Where captured. Where sold. The slave trade.
III. Gold and Diamonds. Where found.
IV. Ostriches. The wild ostrich. Ostrich farms.

BARBARY STATES

Name the four countries along the Mediterranean Sea west of Egypt. They have a climate not unlike that of southern California. They are called the Barbary States, after the Berbers, but many Moors, Arabs, Jews, and negroes also live in these states.

Morocco is opposite Spain. The northern part is fertile, and some grain and fruits are raised, but the herding of horses and sheep is the chief industry. The people are Mohammedans, are miserably poor, and are brutally treated by their sultan. The capital is any city in which the sultan happens to live; sometimes it is Fez, the largest city, and sometimes Morocco. In these cities the white, flat-roofed dwellings have no outside windows, but each is built around an open courtyard, or garden. There are many mosques, with their slender towers, or minarets. The streets are narrow and dirty. Morocco is famous for its beautiful leather.

Algeria is the most important and prosperous foreign possession of France. Find Algiers. It is the largest city and seaport.

Flat-roofed Dwellings of Morocco.

EARTHENWARE MERCHANT, TUNIS.

The country called Tunis has a native monarch, or *bey*, but is really under French control. Its capital is the largest city in the Barbary States.

The French have built railroads and good roads in Algeria and Tunis, and they now control most of the trade and the fertile land, while the native Berbers are the industrious laborers. Much grain and wine and many sheep are shipped to European markets. Tobacco of fine quality is produced. Olives, dates, and esparto, a kind of grass of which paper is made, are produced and exported.

Tripoli is a poorly governed Turkish province. Most of the land is a desert.

Sketch a map of Africa; show the Barbary States, and locate the cities of Morocco, Algiers, and Tunis.

TOPICS ON THE BARBARY STATES

I. NAME AND LOCATION OF EACH.
II. CLIMATE AND PRODUCTIONS.
III. CITIES.
IV. PEOPLE. Natives. Europeans.

THE SAHARA

The Sahara is larger than the United States. It is part of a vast barren tract that stretches across Africa and most of Asia. Trace this belt on the map of Eurasia and name the different countries it crosses. This belt is barren not so much because the soil is sterile or sandy, as because so little rain falls that few kinds of plants can grow. In some parts it is so dry that no plants of any kind can live.

This desert is probably the hottest part of the earth, though in places the nights are cool, and sometimes cold enough to freeze water.

Some parts of the Sahara are covered with loose rocks, and in others there are sand dunes that drift about with the wind. Sometimes fierce winds blow and the air is so full of fine sand that it is almost as dark as night. Then the camels and their drivers lie upon the ground with their heads almost buried in the sand until the storm has passed.

Toward the south, where the climate is moister, the Sahara gradually gives place to the

A CAMP IN THE DESERT.

fertile lands of the Sudan. At places in the desert there are springs or wells. Near these grass and date palms grow. Except the valley of the Nile, these fertile spots, or *oases*, are the only parts of the Sahara in which people have their homes. Caravan routes lead through oases, where the camels may have food and water.

Sketch Africa; locate the Sahara, and show its mountain range.

TOPICS ON THE SAHARA

I. LOCATION. In Africa. In the desert belt.
II. SURFACE.
III. WINDS AND SAND STORMS.
IV. VEGETATION.
V. CARAVAN ROUTES.

EGYPT AND ABYSSINIA

What sea is north of Egypt? What sea is east? What river flows through the country? How was the Nile delta made? What kind of soil has it? What other river do you know of that has a delta?

Egypt is several hundred miles broad, but the only part in which people can live is the flood plain of the Nile, rarely over four or five miles wide. On each side of this narrow strip is the hot, dry desert.

Except in the north scarcely a drop of rain falls on this flood plain, and the crops must be irrigated from the Nile. Once a year, the rains in the highland of Abyssinia cause the river to overflow its banks on either side. When the flood subsides, there is left a coating of mud over the land, which yields wonderful harvests of cotton, sugar, rice, and wheat. Perhaps no other country produces such fine dates, melons, and figs. These fertile lowlands of the Nile are very densely populated.

RAISING NILE WATER FOR IRRIGATION.

The Egyptians are a mixed race. Most of them are of Arab and negro blood, and are Mohammedans. The Arabic language prevails.

Egypt is called a Turkish possession, for the ruler, or *khedive*, pays tribute to Turkey. But the real rulers of Egypt are the British, who control the Suez Canal.

The ancient Egyptians were civilized long before even the Greeks. They built in the Nile valley many vast temples, monuments, and tombs, the huge ruins of which still stand. One of the old monuments, or *obelisks*, which stood in Egypt in the time of Moses, has been brought to New York city and placed in Central Park.

Find Cairo. It is the capital of Egypt. Near it are the pyramids. These were built many thousand years ago as tombs for the kings. Find Alexandria, the chief seaport. Where are Suez and Port Said?

Where is the Nubian Desert? Nubia and much of the country south of it belong to Egypt and Great Britain. In this part of the Nile are found the crocodile and the hippopotamus, which is something like a hog, but very much larger.

Many of the people of Abyssinia are Christians. They are thrifty farmers, herders, and traders. There are also many Arab slave traders in the country. It is thought that the coffee tree came first from the Abyssinian plateau.

Sketch Africa; show Egypt, the Nile, and the lakes near its source.

TOPICS ON EGYPT

I. LOCATION.
II. THE NILE BASIN. Shape and position. The river: length; delta; floods. Soil and productions.
III. PEOPLE. Government. Ancient civilization.

GREAT PYRAMID, EGYPT.

THE SUDAN AND THE KONGO STATE

South of the Sahara, stretching across the continent from Cape Verde to the Abyssinian highland, is a broad belt of fertile land called the Sudan. It is a part of the well-watered region of equatorial Africa, and is composed partly of open lands and partly of forests.

There is no boundary between the Sahara and the Sudan, but the desert gradually disappears as the rainfall increases. Name two large rivers in the Sudan; a lake. The Sudan is nearly as large as the United States.

The name *Sudan* means "black." It is in this part of Africa that the most civilized negro tribes live. They cultivate cotton and grain, own herds of cattle, and manufacure cotton cloth and leather goods. Each great tribe has its sultan, or king. Most of the people of the Sudan are Mohammedans.

CARRYING IVORY TO THE COAST.

There are a few large native towns in the Sudan, with bazars, or markets, where the Arab merchants collect the products of the Sudan before they are carried to the seaports for shipment.

In the Sudan are found the giraffe, the elephant, and also the lion, which is common to most parts of Africa.

What state occupies most of the Kongo basin? This region is covered with dense forests, and is the home of many millions of people.

What large animal found in much of this region is hunted and killed? Ivory and rubber are valuable exports. In what respects is the Kongo basin like the rubber-producing region of South America? The rubber of the Kongo basin, however, comes mostly from vines and not from trees, as does that of the Amazon basin.

Though the Kongo basin has a climate unsuited to Europeans, there are a few traders

A VILLAGE IN THE KONGO STATE.

in this region from Belgium and other European countries. Steamers sail on the rivers, but much merchandise is carried on the heads or shoulders of the natives over the narrow trails which everywhere cover the interior of Africa. The Kongo State is controlled by the King of the Belgians. Its trade is chiefly with Belgium.

What is the capital of the Kongo State?

Sketch Africa; locate the Sudan, the Kongo River, the Kongo State, and Boma.

TOPICS ON THE SUDAN AND THE KONGO STATE

I. LOCATION. Sudan. Kongo State.
II. THE KONGO RIVER.
III. CLIMATE AND RAINFALL.
IV. FORESTS AND ANIMALS.
V. PEOPLE. Natives. Europeans.
VI. TRADE.

COAST COUNTRIES

Various European nations have established colonies among the negro tribes of the west coast of Africa. Where are Sierra Leone and Liberia? One was established by Great Britain, and the other by the United States, for freed slaves. Liberia is now an independent republic.

The west coast of Africa is rich in gold. Coffee, cotton, and sugar cane are exported, but the chief product of the coast region is an oil pressed from the nut of a palm tree. Palm oil is used in Europe and in the United States for making soap. The forests yield india rubber, and copal, from which the best varnish is made. All these products are exported to Europe and America.

The east coast also is divided among European countries. The chief products are ivory and rubber. The Arabs are still secretly engaged in the slave trade. Zanzibar, comprising two small islands, is a native monarchy controlled by Great Britain. The town of Zanzibar is an important trade center of the east coast. Its chief export is cloves.

SULTAN'S PALACE, ZANZIBAR.

The island of Madagascar is now a French colony. The former ruling class belongs to the Malay race, and is partly civilized. There are many negroes held as slaves. Gold and copper are mined, but farming and cattle raising are the chief employments. Rice, sugar cane, coffee, and cotton are cultivated. Gold and cattle are the chief exports. The greater part of the trade is with France. Tananarivo is the capital. What is the chief seaport?

TOPICS ON COAST COUNTRIES

I. WEST COAST. II. EAST COAST. III. MADAGASCAR.

PARTLY CIVILIZED NATIVES OF SOUTH AFRICA.

SOUTH AFRICA

The region from the Cape of Good Hope northward to the Orange River is known as Cape Colony. What is its capital? The first owners of Cape Town were the Dutch, who settled there not long after New York was founded. But just as the English took New York, so they afterwards captured Cape Colony, which is now one of the most prosperous countries in Africa.

NATIVES' HUTS, SOUTH AFRICA.

SORTING DIAMONDS, KIMBERLEY.

The Dutch and the English did not live very peaceably together; so the Dutch settlers, or Boers, moved north across the Orange and Vaal rivers, and formed two republics, which were later annexed by the British, and now form the Transvaal Colony and the Orange River Colony.

The Boers are a thrifty people, and are engaged chiefly in farming and herding. The rich gold and diamond mines are largely in the hands of the British, who also have extensive ostrich farms. The chief exports of South Africa are diamonds, gold, wool, grain, and hides.

Where is Kimberley? More diamonds come from the mines near Kimberley than from all the rest of the world. Johannesburg is the center of the gold-mining region. Much of the labor in the mines is done by African natives and by Chinese.

Railways have been built through much of this region to seaports on the southern and southeastern coasts. Cape Town is the principal seaport of southern Africa.

Many of the black people of South Africa are becoming civilized. They tend the herds and do much of the work on the farms, as well as in the mines.

Sketch Africa; locate Cape Colony and adjacent British colonies. Locate Cape Town, Kimberley, and Johannesburg.

TOPICS ON SOUTH AFRICA

I. COUNTRIES. II. HISTORY. III. MINES.

CORRELATIONS AND COMPARISONS

Extent and Coast. — In what zone is the greater part of Africa? What other grand division lies mostly in the torrid zone? Into what other zones does Africa extend? Does any other grand division extend into all three of these zones? Name a winter month on the north coast of Africa; on the south coast. How does Africa compare with North America in size?

What oceans and seas border Africa? What great gulf is on the west coast? Name three small island groups near the northwest coast. What large island is near the southwest coast? What channel separates Madagascar from the mainland?

Surface and Drainage. — What part of Africa is mostly highland? mostly lowland? What mountains are in the northwest? in the southeast? in the east near the equator? What highland is in the east, north of the equator?

What four great rivers are on the Atlantic slope of Africa? Where does each have its source? In what direction and into what does each flow? What great river is on the Indian Ocean slope? Into what does it flow? What lake is in its basin?

What and where is the Sahara? What makes it a desert? Do any plants grow in this region? Where is there another dry region in Africa? Where and what is the Sudan? In what respects does it differ from the Sahara? Where is the forest region of Africa? How does this region differ from the northern part of the Sudan?

People and Countries. — To what race do most of the people of Africa belong? What part of Africa is the home of the black race? To what race do the people of northern Africa belong? What natural barrier separates northern Africa from the land of the blacks? How is this barrier crossed?

Name five countries on the north coast, beginning at the west, and give some fact concerning the industries and products of each. Mention some European possessions in central and southern Africa, and some of their productions.

Sketch or trace a map of Africa and mark in the proper places the names of six important products.

Cities. — Locate and tell some fact concerning Cairo, Alexandria, Suez, Algiers, Fez, Cape Town, Zanzibar.

AUSTRALIA AND ISLANDS OF THE PACIFIC

AUSTRALIA

In what direction from Asia is Australia? What tropic crosses it? What grand divisions of the other continents are crossed by the same tropic? In what zones is Australia? What are the winter months in southern Australia? What ocean is east of Australia? What ocean is south and west? In what part of Australia are the highlands? In what part are the longest rivers? Practice drawing an outline map of Australia.

AUSTRALIA. (Same scale as maps of North America, South America, Eurasia, and Africa.)

Australia, the smallest of the continents, is not quite so large as the United States.

The surface is mostly a low, dry plateau, with ranges of mountains near the east coast. In the southeast the mountains are separated from the interior plateau by broad lowlands. The principal rivers are in these lowlands.

UNDERGROWTH IN A NORTHERN AUSTRALIAN FOREST.

They are quite large during part of the year, but in the dry season most of them dry up or sink into the sandy soil. The lakes are salt marshes or shallow pools.

Over the interior, strange shrubs and spiny grasses form a thicket so tangled and bristling that only a few wild animals can crawl through it. There are forests on the mountain slopes in the east, and near the northern coast. But even here the vegetation is unlike that of other lands. Some of the forest trees are among the tallest in the world, some shed their bark in winter instead of their leaves, and the leaves of others grow with their edges turned toward the sun.

The animals of Australia are even stranger than the plants. Many of the native birds are like those of Asia, but most of the four-footed animals are *pouched* like the opossum. On the breast of the mother is a pouch in which the young are carried for some time after

birth. There are many kinds of these pouched animals. The largest is the kangaroo, which has powerful hind legs on which it travels swiftly by jumping, without touching its weak fore legs to the ground.

The natives are black savages, very degraded and ignorant. Few of them now remain.

Native Australians.

About a hundred years ago few white men lived in Australia, and the English sent their criminals to live there instead of keeping them in prison in England. Soon it was found that Australia was a fine country for sheep farming. Then free colonists began to go there. By and by gold was discovered, and at last England stopped sending criminals there.

Hoist at an Australian Gold Mine.

The gold mines are now among the richest in the world, but the chief occupation of Australia is sheep farming. Over one fourth of the world's wool product is grown in Australia, and great quantities are exported, chiefly to England. Tallow, hides, leather, and meats are exported also, as well as wheat and flour, gold and tin. In exchange for these, manufactured articles are sent from the mother country.

Australia is divided into five states, which, with the island of Tasmania, form the Australian Commonwealth. There is a governor-general appointed by the British sovereign, and a parliament chosen by the people. Dalgety is the capital of the Commonwealth.

What is the name of the most southern state? Victoria is the greatest gold-producing region. What is its capital?

What state is north of Victoria? New South Wales is the richest and most populous state of Australia. Its capital is a port for steamships from San Francisco and Vancouver.

What state is north of New South Wales? Sugar is raised in Queensland. Name the capital. In South Australia only a few square miles along the coast are productive. What is the capital and chief seaport of South Australia? of Western Australia?

Railways have been built from the larger cities of Australia to the ranches and mines in the interior, and the inhabitants are among the foremost people of the world in their modes of government and education.

Loads of Australian Wool.

Though Australia is nearly as large as the United States, it contains but half as many inhabitants as the state of New York.

ISLANDS OF THE PACIFIC

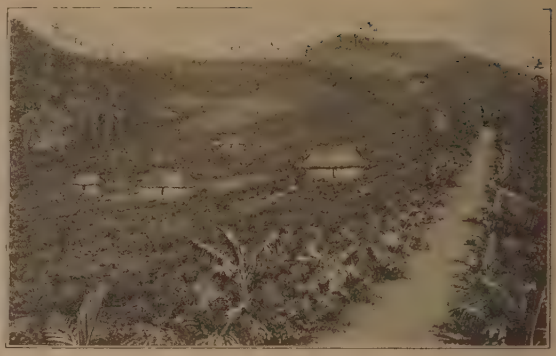
What island is just south of Australia? Tasmania is a plateau with very fertile valleys. For a long time convicts were sent there as well as to Australia. The chief exports are copper, silver, and wool. What is the capital?

What group of islands is southeast of Australia? What large island is north? What is the name of the sea east of Queensland? What coral reef lies in this sea?

The large islands near Australia are rugged plateaus with high mountain ranges. Some of the small islands shown on the map are the tops of volcanoes which are partly covered by the sea; others are low coral islands.

New Zealand is a volcanic region, containing geysers like those of the Yellowstone Park. The two large islands are together about twice as large as the state of New York. Sheep raising is the chief industry, and wool and

BATHING IN A GEYSER, NEW ZEALAND.



A PLANTATION, FIJI ISLANDS.

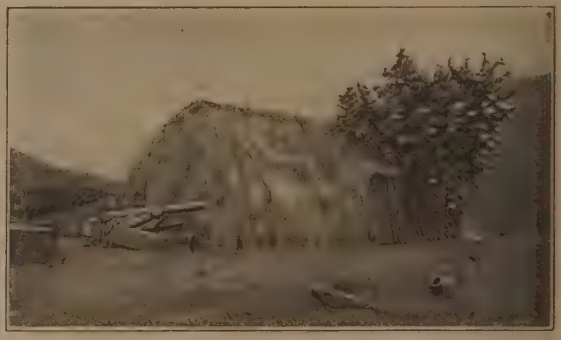
meat are exported. New Zealand is a British colony, and most of the people are of English descent. The natives, called Maoris, belong to the Malay race. What is the capital? Where is Auckland? Steamships from San Francisco call at this port. Lines of railway have been built through the islands.

The Fiji Islands, north of New Zealand, are another British colony. The native Malays have been so far civilized that they now work on the plantations, from which sugar, fruit, and cocoanuts are sent to New Zealand and Australia.

New Guinea is owned by the Dutch, British, and Germans; but very few white people live there, and the natives are savages.

The Hawaiian Islands are a group of small islands in the Pacific Ocean, near the Tropic of Cancer, and about two thirds of the distance from Sydney to San Francisco. They form a territory of the United States. While Americans own the greater part of the land, most of the inhabitants are Japanese, Chinese, Portuguese, and natives. Most of the sugar used on the Pacific coast of our country is made from Hawaiian sugar cane. Honolulu, the capital, is an important stopping place for steamships.

NATIVES' HUTS, NEW GUINEA.



GRASS HOUSE, HAWAIIAN ISLANDS.

TOPICS ON AUSTRALIA AND ISLANDS OF THE PACIFIC

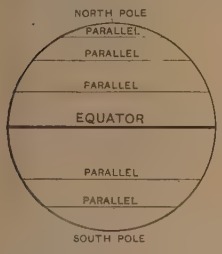
I. HISTORY OF AUSTRALIA. Settlement. Government. States. Cities. Trade relations.

II. DESCRIPTION OF AUSTRALIA. Surroundings. Surface. Vegetation: native; cultivated. Animals. People.

III. ISLANDS OF THE PACIFIC. Tasmania. New Zealand. Fiji Islands. New Guinea. Hawaiian Islands.

LATITUDE AND LONGITUDE

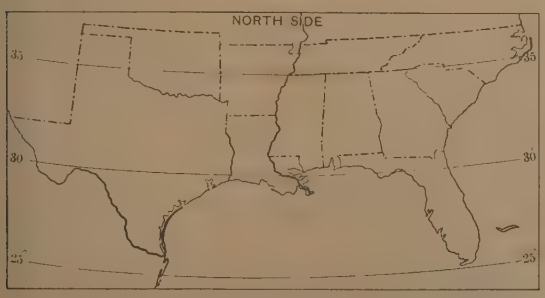
As we have learned, the equator extends east and west around the earth, just halfway between the north pole and the south pole.



We may imagine any number of east and west lines extending around the earth on either side of the equator, or we may draw them on a globe. Such lines are called *parallels of latitude*, and several are shown on the above diagram.

For convenience in telling how far a parallel is from the equator, the distance from the equator to either pole is divided into ninety equal parts, called *degrees* (marked °). The degrees are numbered both north and south from the equator to each of the poles. The parallel 1° north of the equator is in 1° north latitude. The parallel 20° south of the equator is in 20° south latitude, and so on. The north pole is in 90° north latitude, and the south pole in 90° south latitude.

Parallels are usually drawn on maps and numbered. They indicate the directions east and west on the map, and the number indicates how many degrees each parallel is from the equator. Are the parallels on the sketch below in north or in south latitude? How can you tell?



We may imagine any number of north and south lines extending from pole to pole across the equator and parallels, as in the next diagram. Such lines are called *meridians*. The distance between meridians is called *longitude*, and, like latitude, is reckoned in degrees. But it is measured eastward and westward halfway around the earth, from a selected *prime meridian*. The meridian of 90° west longitude is one fourth the distance around the earth westward, and the meridian of 90° east longitude is one fourth of the distance around the earth eastward, from the prime meridian. The meridian of 180° west longitude is the same as the meridian of 180° east longitude, and is just halfway around the earth from the prime meridian.

Any meridian may be selected as the prime meridian, but the one passing through the Observatory of Greenwich, in London, England, is generally used.

Meridians, as well as parallels, are usually drawn on maps and numbered. They indicate the directions north and south on the map, and their numbers indicate how far around the earth the meridians are from the prime meridian.

Turn to the map of the Southern Section of the United States and point out the meridians; the parallels. Point to New Orleans on the map. What is its latitude? What is its longitude? No other place on the earth can have exactly the same latitude and longitude. Thus the position of a place is described clearly by stating its latitude and longitude.

The latitude of any place may be ascertained by measuring the distance of the polar star above the horizon; its longitude may be ascertained by observing the difference between its sun time and that of the prime meridian.

CORRELATIONS AND COMPARISONS

How does the land surface of the globe compare in extent with the water surface? About which pole is the larger ocean? Which oceans extend from one polar region to the other? Which ocean is really a great bay? Compare the Atlantic and Pacific oceans in number of tributary rivers, and in irregularity of coasts. Compare them in civilizations on their coasts, and in number of seaports.

Compare the northern and southern hemispheres as to land and water. Name the grand divisions in the order of their size.

Locations. — What grand divisions lie wholly in the northern hemisphere? What grand divisions are crossed by the equator? by the Tropic of Cancer? by the Tropic of Capricorn? by the polar circles?

Outlines. — Which grand division has the most regular outline? the most irregular outline? Make a list of the peninsulas of Eurasia; of North America. What is the largest sea nearly inclosed by a continent? How is it connected with the oceans?

Highlands. — What highland is between the Cape of Good Hope and the Red Sea? What plateaus are between the Red Sea and Bering Strait? What mountains? What part of the highland of Eurasia extends into Europe? What line of highlands extends from Bering Strait to Cape Horn? What plateaus does it include? What mountains? Beginning at Cape Horn, make a list of the plateaus and mountain ranges of the great highland regions which extend from this cape to the Cape of Good Hope. Beginning with South America, make a list of the mountains of the world which are not included in the preceding list.

Rivers. — Into what ocean does the long slope of Africa drain? of Eurasia? of North America? of South America? Beginning at Cape Horn, make a list of all the large rivers of the world which empty into the Atlantic or the Arctic Ocean. Beginning at Cape Horn, make a list of the large rivers of the world which empty into the Pacific or the Indian Ocean. How does the Pacific and Indian Ocean slope compare in length with the Atlantic and Arctic Ocean slope in each grand division? Which slope has the more large rivers? the more extensive plains?

Plains. — Where are the grassy plains of Eurasia? Where are the grassy plains of America? of Africa? What are they called in North America? in South America? in Eurasia? What animals are found in the Sudan? What animals are found on the llanos? on the pampas? in Australia?

People. — Make a list of cities found in the highland regions of the world; a list of cities in the lowland regions. Which list is the longer? Why? Which grand division has the most people? Which one is second in population? Which has the fewest people? Which race went to Australia from Europe? What races live in Africa? Which went there? From what grand division? What races live in Eurasia? In what parts does each mostly live? What races live in America? Which came here? From what grand division? What race has spread over the whole world as conquerors?

Rainfall. — In what zone does most rain fall? In what part of the zone is the rainfall heaviest? What large rivers of the world have most of their basins in equatorial regions? Where are the rainless regions of Africa? of Eurasia? of America?

Natural Products. — Make on the board a list of the chief food plants which you have learned about. Put after each the names of the regions where it grows. Find out whether these regions are alike in climate; in surface. Tell how each of these regions can find a way to export its products. Make a list of the regions of the world where animals graze. Find out whether these regions are alike in climate; in surface. Tell how they export their products. Make a list of the chief minerals which you have learned about. Put opposite each the name of the grand division where it is found.

Manufactures. — What have you learned are the two great manufacturing grand divisions? What minerals are found in those grand divisions? Which grand divisions carry on the most trade? Why?

Latitude and Longitude. — Through what European countries does the meridian of Greenwich pass? Through what countries of Africa? Through what northern sea does the 180th meridian pass? Near what important groups of southern islands? What meridian passes through eastern Nova Scotia? Through what countries of South America does it pass? What country of South America is directly south of the Isthmus of Panama? What states of North America are directly north of the Isthmus of Panama?

Are the Japan Islands or the British Isles farther north? What country of North America is in the same latitude as the British Isles? Compare the climate of the two countries. What countries of Europe are in about the same latitude as New York? Compare their climate with that of New York. Which is colder — Cape Horn or Cape of Good Hope? Why? Which city is the farthest south, Melbourne, Valparaiso, or Cape Town? Compare the islands of Tasmania, New Zealand, and Tierra del Fuego in latitude. Compare the West Indies with the Sahara in latitude; in climate. Explain the difference.

SIZE AND POPULATION

SUMMARY.

Length of the earth's axis (miles)		7,900
Length of the equator	"	24,900
Earth's Surface (sq. miles)		**196,900,000**
Pacific Ocean	" "	71,000,000
Atlantic Ocean	" "	34,000,000
Indian Ocean	" "	28,000,000
Antarctic Ocean	" "	7,500,000
Arctic Ocean	" "	4,000,000
The Sea	" "	**144,500,000**

	Area in Sq. Miles.	Population.
Asia	17,056,000	909,199,000
Africa	11,512,000	141,204,000
North America	9,431,000	106,095,000
South America	6,856,000	38,483,000
Europe	3,842,000	400,700,000
Australia, etc.	3,710,000	6,458,000
The Land	**52,407,000**	**1,602,139,000**

ASIA.

Russia in Asia	6,656,000	20,950,000
Chinese Empire	4,301,000	426,131,000
Japanese Empire	177,000	50,006,000
Korea	84,000	9,670,000
British India, etc.	1,918,000	299,422,000
Other British Possessions	20,000	1,012,000
Nepal, Bhutan	73,000	3,200,000
Portuguese India, etc.	1,000	651,000
Siam	245,000	6,320,000
Fr. Indo-China, etc.	256,000	15,922,000
Afghanistan	241,000	4,550,000
Persia	635,000	9,000,000
Turkey in Asia	706,000	17,178,000
Arabia	955,000	1,950,000
East Indies	788,000	43,237,000
Total	17,056,000	909,199,000

AFRICA.

Morocco	Including parts of the Sahara	176,000	7,000,000
Algeria		344,000	4,802,000
Tunis		65,000	1,800,000
Tripoli		406,000	1,000,000
Egypt		248,000	9,717,000
Sahara, remaining part		2,461,000	791,000
Abyssinia		312,000	8,330,000
Eritrea		42,000	331,000
British E. Africa		433,000	4,908,000
Somaliland, etc.		214,000	603,000
Sudan		2,972,000	57,675,000
Kongo State		927,000	19,000,000
Angola		491,000	3,840,000
Port. E. Africa		296,000	2,300,000
Ger. E. Africa		374,000	6,855,000
Ger. S. W. Africa		318,000	210,000
Transvaal Colony		114,000	1,345,000
Orange Riv'r Col.		48,000	387,000
Cape Colony		277,000	2,410,000
Rhodesia		408,000	1,350,000
Other Br. S. Afr.		348,000	2,503,000
African Islands		238,000	4,047,000
Total		11,512,000	141,204,000

NORTH AMERICA.

	Area in Sq. Miles.	Population.
Greenl'd and Icel'd	877,000	91,000
British America	3,809,000	5,600,000
United States	3,089,000	75,995,000
Alaska	591,000	64,000
Mexico	767,000	13,606,000
Central America	206,000	4,422,000
West Indies	92,000	6,317,000
Total	9,431,000	106,095,000

SOUTH AMERICA.

Colombia	466,000	3,917,000
Venezuela	364,000	2,445,000
Guiana, Brit.	95,000	296,000
Guiana, Dutch	50,000	87,000
Guiana, French	30,000	33,000
Brazil	3,301,000	14,334,000
Ecuador (incl. Galapagos Islands)	119,000	1,272,000
Peru	439,000	4,586,000
Bolivia	442,000	1,766,000
Chile	293,000	3,174,000
Argentina	1,083,000	4,957,000
Paraguay	98,000	636,000
Uruguay	69,000	978,000
Islands	7,000	2,000
Total	6,856,000	38,483,000

EUROPE.

British Possessions	121,000	41,824,000
France	207,000	38,983,000
Spain	192,000	18,235,000
Portugal	36,000	5,430,000
Belgium	11,000	6,694,000
Netherlands	13,000	5,104,000
Denmark	15,000	2,465,000
German Empire	211,000	60,852,000
Switzerland	16,000	3,325,000
Austria-Hungary	261,000	47,153,000
Italy	111,000	32,487,000
Sweden	173,000	5,136,000
Norway	124,000	2,222,000
Russia in Europe	2,113,000	109,726,000
Turkey in Europe	65,000	5,897,000
Bulgaria	37,000	3,744,000
Crete	3,000	310,000
Roumania	51,000	5,957,000
Servia	19,000	2,494,000
Montenegro	4,000	228,000
Greece and islands	25,000	2,434,000
Spitzbergen, etc.	34,000	
Total	3,842,000	400,700,000

AUSTRALIA.

Australia Com.	2,973,000	3,983,000
New Zealand	105,000	816,000
New Guinea Gr.	311,000	700,000
Hawaiian Islands	6,000	154,000
Other islands	61,000	805,000
South Polar Region	254,000	
Total	3,710,000	6,458,000

UNITED STATES, 1900.

	Pop., 1905.	Sq. Miles.	Population.
Alabama		51,998	1,828,697
Arkansas		53,335	1,311,564
California		158,297	1,485,053
Colorado		103,948	539,700
Connecticut		4,965	908,420
Delaware		2,370	184,735
Florida	*614,845*	58,666	528,542
Georgia		59,265	2,216,331
Idaho		84,313	161,772
Illinois		56,665	4,821,550
Indiana		36,354	2,516,462
Iowa	*2,210,337*	56,147	2,231,853
Kan. ('06)	*1,611,460*	82,158	1,470,495
Kentucky		40,598	2,147,174
Louisiana		48,506	1,381,625
Maine		33,040	694,466
Maryland		12,327	1,188,044
Mass.	*3,003,680*	8,266	2,805,346
Mich. ('04)	*2,530,016*	57,980	2,420,982
Minnesota	*1,979,912*	84,682	1,751,394
Mississippi		46,865	1,551,270
Missouri		69,420	3,106,665
Montana		146,572	243,329
Nebraska		77,520	1,066,300
Nevada		110,690	42,335
New Hampshire		9,341	411,588
N. Jersey	*2,144,143*	8,224	1,883,669
New York	*8,067,308*	49,204	7,268,894
North Carolina		52,426	1,893,810
N. Dakota	*437,070*	70,837	319,146
Ohio		41,040	4,157,545
Oklahoma		70,057	790,391
Oregon		96,699	413,536
Pennsylvania		45,126	6,302,115
Rhode Isl'd	*480,082*	1,248	428,556
South Carolina		30,989	1,340,316
S. Dakota	*455,185*	77,615	401,570
Tennessee		42,022	2,020,616
Texas		265,896	3,048,710
Utah		84,990	276,749
Vermont		9,564	343,641
Virginia		42,627	1,854,184
Washington		69,127	518,103
West Virginia		24,170	958,800
Wisconsin	*2,228,949*	56,066	2,069,042
Wyoming	*101,816*	97,914	92,531
Part Great Lakes		61,730	
Total States		*2,851,859*	*75,397,616*

Territories (*Main Body*).

Arizona	113,956	122,931
Dist. of Col. *323,346*	70	278,718
New Mexico	122,634	195,310
Total Territories	*236,660*	*596,959*
Total main body	*3,088,519*	*75,994,575*

Outlying Territory, etc.

Ter. of Alaska	590,884	63,592
Ter. of Hawaii	6,449	154,001
Porto Rico	3,435	953,243
Philippine Is. ('03)	115,026	7,635,426
Tutuila, etc.	77	6,100
Guam	210	9,000
Canal Zone	474	(?)
Persons in U. S. service abroad		91,219
Total outlying	*716,555*	*8,912,581*
Grand Total	*3,805,074*	*84,907,156*

MOUNTAINS AND PLATEAUS.

	Av. Elev. Feet.
Mount Everest	29,000
Himalaya Mountains	19,000
Andes Mountains	13,000
Caucasus Mountains	10,000
Rocky Mountains	10,000
Atlas Mountains	9,000
Alps Mountains	8,500
East Australian Mountains	5,000
Appalachian Mountains	2,500
Plateau of Tibet	15,000
Plateau of Bolivia	12,500
Rocky Mountain highland—	
in the United States	5,000
in Mexico	7,500
Abyssinian highland	6,500
Plateau of Iran	5,000
Desert of Gobi	3,500
Plateau of Guiana	2,000
Brazilian plateau	2,000

RIVERS AND THEIR BASINS.

	Area of Basin in Sq. Miles.	Length, Miles.
Amazon, S. America	2,320,000	3,400
Amur, Asia	780,000	2,700
Arkansas, U.S.	189,000	2,000
Colorado, U.S.	230,000	1,000
Columbia, N. America	290,000	1,400
Danube, Europe	320,000	1,800
Dnieper, Russia	197,000	1,300
Don, Russia	170,000	1,100
Euphrates, Asia	490,000	2,000
Ganges, India	600,000	1,800
Hoang, Chin. Empire	390,000	2,800
Hudson, U.S.	13,000	300
Indus, Asia	360,000	1,900
Kongo, Africa	1,500,000	2,800
Lena, Siberia	900,000	2,800
Loire, France	47,000	600
Mackenzie, Canada	680,000	2,100
Mekong, Asia	280,000	2,600
Mississippi-Missouri, U.S.	1,250,000	4,200
Mississippi proper	1,250,000	2,600
Missouri	527,000	2,900
Nelson-Saskatchewan, Can.	130,000	1,900
Niger, Africa	1,000,000	2,900
Nile, Africa	1,300,000	3,900
Ob, Asia	1,100,000	3,000
Ohio, U.S.	202,000	1,260
Orange, Africa	270,000	1,200
Orinoco, S. America	370,000	1,500
Plata, S. America	1,250,000	2,500
Rhine, Europe	87,000	810
Rio Grande, N. America	230,000	1,800
St. Lawrence, N. America	565,000	2,100
São Francisco, Brazil	210,000	1,800
Volga, Russia	590,000	2,300
Yangtze, Chin. Empire	690,000	3,100
Yenisei, Asia	1,500,000	3,000
Yukon, N. America	380,000	2,000
Zambezi, Africa	580,000	1,600

POPULATION OF IMPORTANT CITIES.

CITIES IN THE UNITED STATES.

	Pop. 1905.	U.S. Cen. 1900.
Albany, N. Y.	*98,374*	94,151
Allegheny, Pa.		129,896
Atlanta, Ga.		89,872
Augusta, Ga.		39,441
Baltimore, Md.		508,957
Birmingham, Ala.		38,415
Boston, Mass.	*595,380*	560,892
Buffalo, N. Y.	*376,587*	352,387
Cambridge, Mass.	*97,434*	91,886
Charleston, S. C.		55,807
Chattanooga, Tenn.		32,490
Chicago, Ill.		1,698,575
Cincinnati, O.		325,902
Cleveland, O.		381,768
Columbus, O.		125,560
Dallas, Tex.		42,638
Dayton, O.		85,333
Denver, Col.		133,859
Des Moines, Ia.	*75,626*	62,139
Detroit, Mich.	*317,591*	285,704
Duluth, Minn.	*64,942*	52,969
Fall River, Mass.	*105,762*	104,863
Galveston, Tex.		37,789
Grand Rapids, Mich.	*95,718*	87,565
Harrisburg, Pa.		50,167
Hartford, Conn.		79,850
Indianapolis, Ind.		169,164
Jacksonville, Fla.	*35,301*	28,429
Jersey City, N. J.	*232,699*	206,433
Kansas City, Kan.	*67,614*	51,418
Kansas City, Mo.		163,752
Lawrence, Mass.	*70,050*	62,559
Lincoln, Neb.		40,169
Little Rock, Ark.		38,307
Los Angeles, Cal.		102,479
Louisville, Ky.		204,731
Lowell, Mass.	*94,899*	94,969
Lynn, Mass.	*77,042*	68,513
Manchester, N. H.		56,987
Memphis, Tenn.		102,320
Milwaukee, Wis.	*312,948*	285,315
Minneapolis, Minn.	*261,974*	202,718
Mobile, Ala.		38,469
Nashville, Tenn.		80,865
Newark, N. J.	*283,289*	246,070
New Bedford, Mass.	*74,362*	62,442
New Haven, Conn.		108,027
New Orleans, La.		287,104
New York, N. Y.	*4,013,781*	3,437,202
Norfolk, Va.		46,624
Omaha, Neb.		102,555
Paterson, N. J.	*111,529*	105,171
Philadelphia, Pa.		1,293,697
Pittsburg, Pa.		321,616
Portland, Me.		50,154
Portland, Ore.		90,426
Providence, R. I.	*198,635*	175,597
Pueblo, Col.		28,157
Richmond, Va.		85,050
Rochester, N. Y.	*181,666*	162,608
Sacramento, Cal.		29,282
Saginaw, Mich.	*46,610*	42,345
St. Louis, Mo.		575,238
St. Paul, Minn.	*197,023*	163,065
Salt Lake City, Utah		53,531
San Antonio, Tex.		53,321
San Francisco, Cal.		342,782
Savannah, Ga.		54,244
Scranton, Pa.		102,026
Seattle, Wash.		80,671
Springfield, Ill.		34,159
Springfield, Mass.	*73,540*	62,059
Syracuse, N. Y.	*117,503*	108,374
Tacoma, Wash.		37,714
Toledo, O.		131,822
Topeka, Kan.	*37,641*	33,608
Trenton, N. J.	*84,180*	73,307
Troy, N. Y.	*76,910*	60,651
Washington, D. C.	*323,346*	278,718
Wilmington, Del.		76,508
Wilmington, N. C.		20,976
Worcester, Mass.	*128,135*	118,421

FOREIGN CITIES.

	Latest Census.
Alexandria, Egypt	320,000 ('97)
Amsterdam, Netherlands	551,000 ('04)
Antwerp, Belgium	292,000 ('04)
Athens, Greece	112,000 ('96)
Bangkok, Siam	400,000
Belfast, Ireland	349,000 ('01)
Berlin, Germany	2,040,000 ('05)
Birmingham, England	522,000 ('01)
Bombay, India	776,000 ('01)
Bordeaux, France	258,000 ('01)
Brussels, Belgium	599,000 ('04)
Bucharest, Roumania	282,000 ('99)
Budapest, Austria-Hungary	732,000 ('00)
Buenos Aires, Argen.	1,000,000 ('05)
Cairo, Egypt	570,000 ('97)
Calcutta, India	1,127,000 ('01)
Canton, China	900,000 ('04)
Cape Town, Cape Col.	78,000 ('04)
Christiania, Norway	228,000 ('00)
Cologne, Germany	429,000 ('05)
Constantinople, Turk.	1,125,000
Copenhagen, Den.	378,000 ('01)
Dublin, Ireland	291,000 ('01)
Edinburgh, Scotland	317,000 ('01)
Glasgow, Scotland	736,000 ('01)
Hague, Netherlands	234,000 ('04)
Hamburg, Germany	803,000 ('05)
Havana, Cuba	236,000 ('99)
Hongkong, Asia	284,000 ('01)
Johannesburg, So. Af.	159,000 ('04)
Lisbon, Portugal	357,000 ('00)
Liverpool, England	685,000 ('01)
London, England	4,537,000 ('01)
Lyons, France	459,000 ('01)
Madras, India	509,000 ('01)
Madrid, Spain	540,000 ('00)
Manchester, England	544,000 ('01)
Marseilles, France	491,000 ('01)
Melbourne, Victoria	496,000 ('01)
Mexico, Mexico	345,000 ('00)
Milan, Italy	492,000 ('01)
Montreal, Canada	268,000 ('01)
Moscow, Russia	989,000 ('97)
Naples, Italy	564,000 ('01)
Odessa, Russia	405,000 ('97)
Paris, France	2,714,000 ('01)
Peking, China	1,000,000
Quebec, Canada	69,000 ('01)
Rio de Janeiro, Brazil	750,000 ('00)
Rome, Italy	463,000 ('01)
St. Petersburg, Russia	1,267,000 ('97)
Santiago, Chile	335,000 ('03)
Shanghai, China	651,000 ('04)
Stockholm, Sweden	301,000 ('01)
Sydney, New S. Wales	482,000 ('01)
Tashkend, Rus. Turk.	157,000 ('97)
Teheran, Persia	280,000
Tokyo, Japan	1,819,000 ('03)
Venice, Italy	152,000 ('01)
Vienna, Austria-Hun.	1,675,000 ('00)
Yokohama, Japan	326,000 ('03)
Zurich, Switzerland	153,000 ('01)

INDEX AND PRONOUNCING VOCABULARY

KEY. — VOWELS: ā in lāte, ă in făt, â in câre, ä in fär, à in làst, ạ in fạll, a in was, a in final, au in author; ē in mē, ĕ in mĕt, bĕrry, e in veil, ē in tērm, e in novel; ī in fīne, ĭ in tĭn, ï in police; ō in nōte, ŏ in nŏt, ó in són, ô in fôr, o in do, o in wolf; ū in tūne, ŭ in nŭt, u in rude (= o), u in full, ua = wa, ue = we; ȳ in mȳ, ў in hўmn. CONSONANTS: ç in çent, maçhine, c in can; ġ in ġem, g in ġet; K = German ch; n = ng; s = z; x = gz. *Italic letters are silent.*

Ăb-ŷs-sĭn′ĭ-à 133, 127
A-cā-pụl′co 71
Ad′ē-lāide 138
A′den 122
Ad-rī-ăt′ic Sea 90
Æ-ġē′an (ē-) Sea 90
Af-ġhăn-ĭs-tăn′ 123
Af′rī-cà 11, 13, 126–136
Al-à-bà′mà 57, 59
A-lās′kà 66, 67
Al′bà-ny (ạl′-), N. Y. 46
Al-ēx-ăn′drĭ-à 133
Al-ġē′rĭ-à 131, 132
Al-ġĭērs′ 131
Al′le-ghe-ny 55
Alps 90, 91, 101
Al-taĭ′ Mts. 113
Al-tà-mà-hạ′ (ạl-) R. 56
Am′a-zŏn R. 76
A-mĕr′ĭ-cà 9, 11, 14
Am′ster-dăm 99
A-mụ′ R. 115
A-mụr′ R. 114
An-a-con′dà 64
Ā-nàm′ 124
An′dēs Mts. 75, 76
An-năp′o-lis, Md. 46
Ant-ärc′tic 16, 18
Ant′werp 103
Ap-à-lăch-ĭ-cō′là R. 56
Ap′en-nīnes 90
Ap-pa-lā′chi-an 23, 32
A-rā′bĭ-à, Ar′ăbs 123, 129, 133, 134
Ar′ạl, L. 115
Areh-ān′ġĕl 108
ar-ehī-pĕl′a-go 90
Arc′tic 9, 11, 18
Ar-ġĕn-tī′nà 82, 79, 80
ăr′id regions 35
Ar-ī-zō′nà 63
Ar′kạn-sas 58, 59
Asia (ā′shī-à) 11, 13, 14, 87, 88, 112–125
A-sụn-cĭ-ōn′ 82
Ath-a-băs′cà L. 28
Ath′ĕns 107
At-lăn′tà 59, 60
At-lăn′tic 9, 10, 11, 16
Atlantic plain 25, 32
à-tōll′ 72
Auck′land 140
Au-gus′tà, Ga. 59
Aus-trā′lĭ-à 11, 137–139
Aus′trĭ-à-Huṇ′ġà-ry 100
ax′ĭs 17
Bäb ĕl Män′dĕb, Str. 87
Bà-hä′mȧs 72, 73
Bà-hï′à 81
Baĭ-käl′, L. 115
Bà-ku′ 108
Bäl-e-är′ic Is. 104
Bàl-kän′ 109, 110
Bàl-käsh′, L. 115
Bạl′tic Sea 90
Bạl′tĭ-mōre 54, 51, 52
Bà-lụ-chĭs-tän′ 123
Băng-kŏk′ 124
Ban′ġôr 45
Bän′kà 125
Bar′ba-ry States 131, 132
Bar-ce-lō′nà 105
Bar-rän-quil′la (-kēl′yà) 84
bā′sin 26
Bà-tä′vĭ-à 125
Băt′ŏn Rouge (rọzh) 56
Bà-tụm′ 108
bay 21
Bel-fȧst′ 97
Bel′ġĭ-ŭm 103, 134
Bel-grāde′ 110
Ben-ġạl′, B. 113
Bĕr′bĕrs 129
Bē′ring 21
Bĕr′lin 98
Bĕrn 101
Bil-bā′ō 104
Bil′lings 63
Bil-lĭ-tŏn′ 125
Bir′ming-hạm, Ala. 59; Eng. 97
Bis′bee 63
Bis′cay, B. 90
Bọerş 136
Bō-gō-tä′ 84
Boi′şe, Ida. 61
Bō-kȟä′rà 117
Bo-lĭv′ĭ-à 83, 84, 79, 75
Bō′mà 134
Bŏm-bay′ 122
Bôr-deaux′ (-dō′) 103
Bôr′nē-ō 125
Bŏs′pō-rŭs 110
Bôs′ton 45
Bŏth′nĭ-à, G. 90
Brăh-mà-pụ′trà R. 115
branch 25
Brà-zĭl′ 79–81, 76
Brä′zōs R. 56
Brĭş′bāne 138
Brit′ish, *see* England
Brock′ton 45
Brŭs′ṣeḷş 103
Bụ-ehȧ-rest′ 110
Bụ′dà-pest 101
Buenos Aires (bō′nŭs ā′rĭz) 82
Bŭf′fa-lo 54, 51
Bụl-gā′rĭ-à 109, 110, 95
Bur′mà 124
Bŭtte 63, 64
Ċaĭ′rō 133
Căl-cŭt′tà 122
Căl-ĭ-fôr′nĭ-à 65, 66, 40
Cál-là′ō 84
Cam-bō′dĭ-à 124
Cām′bրĭdge 45
Căn′a-dà 67–70, 29
Canal Zone 71
Can′cer, tropic 18
Can-tŏn′ 119
Can′yon 23
Cape 31
Cape Colony 135, 136
Cape Town 135, 136
Cape Vērde Is. 127
cap′i-tal 36, 43
Cap′rĭ-corn, tropic 18
Cà-rā′cas 85
Căr-ĭb-bē′an Sea 21
Căr-pā′thĭ-an Mts. 90
Căs′pĭ-an Sea 88, 90
Cat′te-gat 99
Cau-cā′sians (-shạnz) 12, 88, 116
Cau′ca-sus Mts. 90, 107
Cā-yĕnne′ 81
Çĕl′e-bēs 113
Central A-mĕr′ĭ-cà 70, 71, 29
Cetinje (tsĕ′tēn-yā) 110
Çey-lŏn′ 122
Çham-plain′, L. 43
channel 14
Chär′leş′ton 60
Char′lotte 59
Chat-ta-noo′gà 59
Chĕs′a-peake B. 49
Çhey-ĕnne′, Wyo 63
Chī-cạ′gō 54, 50–53
Chĭ′le 83, 79, 80
Chĭ′nà, Chī-nēse′ 117–119, 13, 14, 65, 140
Chrĭs-tĭ-ā′nĭ-ä 100
Çin-çin-nā′tĭ 55, 51
Clēve′land 54, 50–52
Cō-lōgne′ 98
Cō-lōm′bĭ-à 83, 84, 79, 80
Cō-lōm′bō 122
Cō-lŏn′ 71
Cŏl-ō-rā′dō 62, 63; R. 31
Colorado Springs 63
Cō-lŭm′bĭ-à 59
Cō-lŭm′bus, Ohio 46
Cŏn-nĕct′ĭ-cut 43–45
Con-stăn-tī-nō′ple 110
con′tĭ-nent 9
Cō-pen-hā′ġen 100
cor′al 72
Cōr′sĭ-cà 103
Crip′ple Creek 63
Cū′bà 72, 73
Cuzco (cụs′cō) 84
Dăl′ġē-ty 138
Dăl′las 60
Dà-măs′cus 124
Dăn′ūbe R. 91, 101, 110
Dar-dà-nĕlles′ 110
Dek′kạn 113, 122
Dĕl′à-wâre 48
del′tà 27
Den′mark, Dăn′ish 99, 100, 94
Den′ver 63
deş′ert 35
Deş Moines′, Ia. 46
des′po-tişm 109
De-troit′ 54, 51
dikes 98
dī-vide′ 27, 28
Dnīe′per R. 91
Dub′lin 97
Dụ-lụth′ 52
dunes 100
Dutch, *see* Netherlands
Dwĭ′nà R. 91
earth′quake 75
east 6
East Central States 46
Eastern Continent 10–13
East In′dĭeş 125
E′brō R. 91
Ec-uà-dōr′ 83, 84, 79, 80
Ed′in-burgh (-bŭr-ō) 97
E′ġỹpt 133
El-bụrz′ Mts. 113
em′pire 97
England (in′gland), English 95–97, 94, 12, 29, 69, 73, 81, 104, 122, 123, 133, 135–140
e-quā′tor 17
E′rĭe Canal 53
Es′kĭ-mōş 67, 68
Eū-phrā′tēş R. 115, 123
Eū-rā′sia (-shĭ-à) 11, 86–88
Eū′rōpe 11, 12, 87–110
Ev′er-ĕst, Mt. 113
Fạlk′land Is. 75
Fall River 44
Fez 131
Fī′jĭ Is. 140
fiôrd (fyôrd) 90
flood plain 27
Flŏr′ĭ-dà 56, 58, 59
Fôr-mō′sà 119
Fort Smith 59
Frânçe, Frĕnch 102, 103, 94, 69, 81, 101, 124, 131, 132, 135
Găl′vĕs-ton 60
Găn′ġēş R. 115, 122
Gà-rōnne′ R. 102
Ġẹ-nē′và 101
Ġeôrġe′town 81
Ġeôr′ġĭ-à 57, 58, 59
Gēr′mà-ny, Ger′man 97, 98, 94, 100, 101, 140
ġeȳ′sēr 62
Gĭ-brạl′tar (-tēr) 104
glā′cier (shēr) 67, 91
Glās′gow (-kō) 97
Gō′bĭ, desert 114
grand division 9
Grand Rapids 52
Great Bā′sin 31, 62
Great Brit′ian 95; *see* England
Great Falls 63
Great Lakes 28, 32
Great Plains 32
Greeçe, Grē′cian 106, 107, 94, 109
Green′land 22, 100
Green′wich (grĭn′ĭj) 141
Guạ-dà-lụpe′ Mts. 56
Guaȳ-à-quil′ (-kēl′) 84
Gu͡ï-ä′nà 81, 76
Gu͡ïn′ea, G. 126
gulf 21
Gŭth′rĭe, Okla. 56
Hāg͡ue 99
Hāi′tĭ 72, 73
Hăl′ĭ-fax 69
Hăm′burg 98
harbor 30
Hăr′rĭs-burg, Pa. 46
Hart′ford (-fērd) 45
Hat′tĕr-ȧs, C. 31
Hà-văn′à 73
Hā′ver-hill 45
Hâv′re 103
Hä-waĭ′ian (-yạn) Is. 140
Hēl′ē-nà, Mont. 63
hem′ĭ-sphēre 15, 16
high′land 23
Hĭ-mā′là-yà 87, 88, 113, 121
Hin′dụ Kụsh′ Mts. 113
Hin′dụs 121, 122
Ho-ăng′ R. 114, 117
Hō′bart (-bērt) 139
Höl′land 98
Höl′yōke 45
Hŏn′dō 119
Hŏng′kŏng′ 119
Hō-nō-lụ′lụ 140
ho-rĭ′zon 7
Hot Springs 60
Hoûs′tŏn 60
Hŭd′sŏn R. 33, 53; B. 21
Huṇ′ġà-ry 100, 101
Hū′rŏn, L. 53
hŭr′ri-cane 72
içe′bergs 67, 21
Içe′land 22, 100
Ī′dà-hō 62, 63
Il-lĭ-nois′ 48, 50, 51
In′dĭ-à 121, 122, 124
In-dĭ-ăn′à 48, 51
In-dĭ-ạn-ăp′o-lis 51, 52
In′dĭ-an Ocean 11
In′dĭ-ȧns 13, 14, 22, 56, 61, 65, 67, 68, 71, 79
In′do-Chī′nà 124
In′dŭs R. 115
I′ō-wà 48, 49
Iquique (ē-kē′kā) 83
Ī-rän′, plat. 113
Ire′land, I′rish 96, 97
Ĭr-kụtsk′ 116, 117
ir-ri-ga′tion 62
ĭs′land 9
Ĭsth′mus 9
It′à-ly, Ĭ-tăl′ian (-yạn) 105, 106, 94, 101
Jà-mā′ĭ-cà 72
Jà-păn′, Jăp-a-nēse′ 119, 120, 140
Jä′và 125
Jē-rụ′sà-lĕm 124
Jo-hän′nĕs-bŭrg (yō-) 136
Ju-ăn′ (hụ-) de Fụ′cà 64
Kàm-chät′kà 113
Kän′ṣas 40, 48
Kansas City 51
Ke′nī-à, Mt. 127
Ken-tuck′y 48
Key West 59
Khīn-ġhän′ (kĭn-) 118
Khī′và (kē′-) 117
Kĭl-ī-màn-jä′rō, Mt. 127
Kim′ber-ley 136
Kio′lẹn (chē′-) Mts. 90
Klŏn′dīke 69
Kŏn′gō R. 127, 128; State 134

Kō-rē′á 120
Kuĕn-lụn′ 113
Lá′dō-gá. L. 91
la-goon′ 56
lake 28, 31
Lă Păz′ 84
lat′i-tude 141
lă′vá 70
Lĕad′ville 63
Lē′ná R. 88, 114
lĕv′ees 27
Lī-bē′rī-á 135
Lī′má 84
Lin′cōln, Neb. 46
Lis′bŏn 105
Little Rock, Ark. 56
Līv′er-pool 96
lla′nŏs 77
Loire (lwär) R. 102
Lŏn′dŏn 95, 96
lŏn′gĭ-tude 141
Lŏs An′gĕl-ēs 66
Lọu-ĭ-şĭ-ă′ná 56, 58, 59
Lọu′is-ville 55, 48
Lŏw′ĕll 44
low′land 25
Lўnn 45
Lў′ŏns 103
Mác-kĕn′zie R. 28
Mc Kin′ley, Mt. 67
Mā′cŏn 59
Măd-á-găs′cár 135
Má-dēi′rá R. 77; Is. 127
Má-drăs′ 122
Má-drĭd′ 104
Má-ğĕl′lan, Str. 75
Mā′ine 43–45
Má-lăc′cá, Str. 124
Ma-lays′ 13, 88, 115, 124, 125, 140
Má-nā′os (-ọsh) 81
Man′ches-ter, Eng. 96; N. H. 44
Man-chu′rī-á 117–119
Măn′dá-lay 124
Má-nīl′á 125
Mā′o-rĭş 140
Mä-rá-*ea*ī′bō, L. 75
Mar′mo-rá, Sea 110
Mar-se*illes*′ 103
Ma′rў-land (mĕr′-) 48, 49
Măs-sá-chū′setts 43–45
Mĕd-ĭ-tĕr-rā′ne-an 14, 89
Mẹ-kŏng′ R. 114
Mel′*bourne* 138
Mem′phis 60
Men′do-cī′no, C. 31
me-rid′ĭ-an 141
Me-sā′bá range 50
Mex′ĭ-cŏ 70, 71, 29
Mịch′ĭ-gan 49, 50, 51
Middle States 46
Mĭl′ạn 106
Mil-wau′kee 54, 51, 52
Mĭn-nē-ăp′o-lis 55, 52
Mĭn-nē-sō′tá 48, 50
Mĭs-sĭs-sĭp′pĭ 57, 59; R. 25–27, 32, 56
Mĭs-so*u*′rĭ 48
Mō-bīle′ 60, 103
mŏn′*arch*-ў 96
Mŏn-gō′lĭ-á 117, 119
Mŏn-gō′lĭ-ans 13, 88
mŏn-soon′ 121
Mŏn-tā′ná 62, 63
Mōn-tẹ-nẹ′grō 109, 110
Mŏn-tē-vĭd′ē-ō 82
Mŏnt-gŏm′er-ў, Ala. 56
Mŏnt-pē′lĭ-er, Vt. 43
Mŏnt-rē-ạl′ 70
Mō-rŏc′cŏ 131
Mŏs′co*w* 108
moun′tains 8, 22
mouth 25
Mō-zạm-bique′ (-bēk′) Channel, 127
Nā′ples 106
Năsh′*ville* 60
Nē-brăs′ká 48
ne′groes 13, 56, 73, 80, 81, 128, 134–136
Nĕth′er-lạnds, Dutch 98, 99, 94, 81, 125, 135, 136, 140
Nē-vā′dá 61
New′ark (-ĕrk) 51, 52
New Bed′ford (-fĕrd) 44
New Eng′land 43
New′*fo*ŭnd-land 69, 22
New Gu*i*n′*ea* 125, 140
New Hamp′shire 43–45
New Hā′ven 45
New Jĕr′sey 48, 51
New Mex′ĭ-cō 63
New Or′le-ạns 60, 103
New South Wā′les 138
New York 48–51; city 51–53, 99
New Zē*a* land 139, 140
Nī-ăg′ă-rá 53
Nī′ger R. 127
Nile R. 128, 133
Nizhni (nyēz′nyĕ) Nŏv′gō-rod (-rōt) 108
north 6
North Á-mĕr′ĭ-cá 9, 21
North Căr-ō-lī′ná 58, 59
North Dá-kō′tá 48
Northeastern Section 43–45
Northern Section 46–55
Nor′way, Nor-wē′ğĭ-an 99, 100, 94
Nō′vá Scō′tia (-shĭ-á) 69, 22
Nū′bĭ-á 133
Ny-äs′sá (nē-), L. 127
Oak′land 66
ō′á-sēş 132
Ŏb R. 88, 114
ō′cean (-shạn) 7, 10
O-dĕs′sá 108
Og′dĕn 64
O-hī′o 48–51
O-*kh*ō′tsk′, Sea 113
Ōk-lá-hō′má 56, 58, 59
O′má-ha 52
O-măn′ 123
O-nē′gá, L. 91
On-tā′rĭ-ō, L. 53
O-pōr′to 105
Ōr′ange (-ĕnj) River Colony 136
Ōr′ĕ-gŏn 65
O-rĭ-nō′cō R. 77
Ot′tá-wá 69, 70
out′let 28
O′zark Mts. 46
Pá-cif′ic 9, 11, 16
Pacific Section 64–66
Pä-mīr′ plat. 113
pam′pạs 77, 79
Pan-á-mä′ 71, 9
Pá-rä′ 81
Pä-rá-gua*y*′ 82, 79, 80
Păr-á-măr′ĭ-bō 81
Pä-rá-nä′ R. 77
Păr′ĭs 103
Păt′er-son 52
Pẹ′chĭ-lī′, G. 117
Pē-king′ 119
pen-in′sū-la 22
Penn-syl-vā′nĭ-á 40, 44, 48–51
Pĕr-năm-bu′cō 81
Pĕr′sia (-shá) 123
Pē-rụ′ 83, 84, 79, 80
Pẹ-tchō′rá R. 91
Phil-á-dĕl′phĭ-á 51–54
Phil′ĭp-pīne Is. 125
Pi*erre*, S.D. 46
Pitts′burg 55, 51, 52
plain 24
Plā′tá R. 77
plá-teau′ (-tō′) 25
Plateau Section 61–64
pole 17
Pŏm-pē′ii (-yē) 106
port 30
Pōrt′land, Me. 45; Ore. 66
Pōr′tō Rĭ′cō 72, 73
Pōrt Sä-ïd′ 133
Pōr′tū-gal, Pōr′tū-gu*ese* 104, 105, 79, 80, 127, 140
Pō-tō-sĭ′ 84
prā*i*′rĭ*es* 32
Prĭ-bĭ-lŏf′ Is. 67
Prŏv′i-dẹnce 44, 45
Prussia (prŭsh′á) 97
Pueb′lō 63
Pū′gĕt Sd. 65, 66
Pўr′ē-nees 90
Quē-bĕc′ 69, 70
Queens′land 138
Quĭ′tō (kē′-) 84
rain 34, 35, 76–78
Rạ′lei*gh* 56
range 23
Răn-goon′ 124
re-pub′lic 35
*Rh*īne R. 91
*Rh*ōde Is′land 43–45
*Rh*ône R. 91
Rich′mond 48
ridge 23
Rĭ′o de Já-nei′rō (zhá-) 80, 81
Rĭ′o de lä Plā′tá 77
Rĭ′o Grän′de 29
Rĭ′o Ne′grō 77
riv′ers 25–28
Rō-á-nōke′ R. 56
Rōch′es-ter 51
Rocky Mountain highland 23, 31, 32, 39
Rocky Mts. 23, 24, 31
Rōme, Roman 105, 94
Rọu-mā′nĭ-á 109, 110
Russia (rŭsh′á) 107, 108, 94, 95, 116, 117
Săc-rá-mĕn′tō, Cal. 64
Săg′ĭ-naw 51
Sá-hä′rá 128, 130, 132
St. Law′rẹnce R. 70
St. Lọu′is 54, 51
St. Mā′ry*s* Canal 53
St. Paul 55
St. Pē′ter*s*-burg 108
Salt Lake City 63
Sam-oy-ēde*s*′ 107
Săn An-tō′nĭ-ō 60
Săn Frăn-çĭs′cō 66
Săn Joaquin (wä-kēn′) R. 65
Săn′tá Fe′, N. Mex. 61
Săn-tī-ä′gō 83
Săn′tos (-tọsh) 81
São Frăn-cĭs′co R. 77
Săr-dĭn′ĭ-á 105
Săs-kătch′e-wan R. 28, 69
Sá-văn′*nah* 60
scale of maps 19
Seăn-dĭ-nā′vĭ-an 99
Seat′land, Seat′tish 96, 97, 90
sea 7, 8, 21
Sē-ăt′tle 66
Se*ine* R. 102
Sẹ-qụl′ 120
Sĕr′vĭ-á 109, 110, 95
Shăng-hā′ĭ 119
shore 7
Sī-ăm′ 124
Sī-bē′rĭ-á 116, 117
Sĭç′ĭ-ly 105
Sĭ-ĕr′rá Lē-ō′nē 135
Sĭ-ĕr′rá Mā′dre 70
Sĭ-ĕr′rá Nē-vā′dá 31, 64
sil′vạs 77
Sin-gá-pō*re*′ 124
Skag-er-rack′ 99
Smyr′ná (smĕr′-) 124
Sō′fĭ-á (-yá) 110
sound 56
source 26
South Á-mĕr′ĭ-cá 9, 74
South Aus-trā′lĭ-á 138
South Căr-ō-lī′ná 57, 58, 59
South Dá-kō′tá 48
Southern Section 56–61
Spain, Span′ish 104, 94, 12, 29, 71, 73, 79, 80
Spring′fĭ*e*ld, Mass. 45; O. 52
Stä-nō-voi′ Mts. 113
state 35, 36
stĕp*pe* 107
Stŏck′hōlm 100
strait 14
Sụ′cre 84
Sụ-dăn′ 127, 134
Sụ-ĕz′ 133; Canal 87, 112
Sụ-mā′trá 125
Sŭ-pē′rĭ-or (-ēr), L. 53
Swē′dẹn, Swēd′ish 99, 100, 94
Swit′zer-land, Swiss 101
Sўd′ney 138
Sўr′á-cūse 51
system 26
table-land 70
Tă-má-tā*ve*′ 135
Tam′pá 59
Tá-ná-ná-rĭ′vo 135
Tăn-găn-yĭ′kä, L. 127
Tash-kend′ (-kĕnt′) 117
Tạş-mā′nĭ-á 139, 138
Tchād, L. 127
Tē-herän′ 123
Tĕn-nĕs-see′ 58, 59
tĕr′ri-to-ry 36
Tĕx′ạs 40, 56–59
Thames (tĕmz) R. 95
Thī-ăn′ Shän′ 113
Tī-bĕt′ 117, 119, 113, 114
Tī-ĕr′rá dĕl Fue′gō 75
Tĭ′grĭs R. 115, 123
Tĭt-ī-cā′cá, L. 84
Tō′kyo (-ke-ō) 120
Tō-lĕ′dō 51, 52
Tômsk 116
Tō-pē′ká, Kans. 46
Tō-rŏn′tō 70
Trăns-vāal′ Colony 136
Tren′ton, N. J. 46
Trin-ĭ-dăd′ I. 75
Trip′o-lĭ 131, 132
trŏp′ic 18
tŭn′drá 107
Tū′nis 131, 132
Tụr-kes-tān′ 116, 117, 119
Tur′key, Turks 109, 110, 94, 95, 123, 124, 132, 133
Tўr′ŏl 100, 101
United Kingdom 96
United States 29–67, 125, 140
Ū′ral Mts. 91, 116
U ru-guay′ 82, 79, 80
Ū′tah 62, 63
Vá-len′cia (-shĭ-á) 85
val′leys 25
Văl-pá-raĭ′sō 83
Van-cọu′ver 69, 70; I. 66
Vĕn-ē-zuē′lá 83–85, 79
Vĕn′ĭçe 106
Ve′rá Cruz (crụs) 71
Vēr-mŏnt′ 43–45
Vē-sū′vĭ-ŭs 106
Vic-tō′rĭ-á 138; L. 127
Vĭ-ĕn′ná 101
Vir-ğĭn′ĭ-á 48, 49, 50
Vis′tū-lá R. 91
Vlá-dĭ-vos-tôk′ (-dyĕ-vás-) 116, 117
vol-cā′no 70, 75
Vōl′gá R. 91
Wāles 96
Wạr′saw 108
Wạ′sătch Mts. 62
Wash′ing-ton 65, 66; city 36, 54
water gap 33
Wel′land Canal 53
West Central States 46
Western Aus-trā′lĭ-á 138
Western Continent 11
West In′dĭ*es* 72, 73, 22
West Vir-ğĭn′ĭ-á 50, 51
Wil-lā′mette R. 66
Wil′liams-pōrt 52
Wil′ming-ton 52
Win′nĭ-peg 69, 70; L. 28
Wis-con′sin 49, 50
Wo*rces*′ter 45
Wў-ō′ming 63
Yăng′tzē R. 114
Yel′lo*w*-stone Park 62
Yĕn-ĭ-se′ĭ R. 88, 114
Yō′kō-hä′mä 120
Yo*u*ngs′town 52
Yụ-cā′tan′ 71
Yụ′kŏn R 28
Zām-be′zĭ R. 128
Zän-zĭ-bär′ 135
zones 17–19, 74
Zụ′rĭ*ch* 101

Aids to Teachers of Geography

Gannett, Garrison, and Houston's Commercial Geography	$1.25
Dryer's Lessons in Physical Geography	1.20
Hinman's Eclectic Physical Geography	1.00
Chamberlain's Field and Laboratory Exercises in Physical Geography	.50
Waldo's Elementary Meteorology	1.50
Price's Observations and Exercises on the Weather	.30
National Geographic Monographs, one volume	2.50

Physiographic Processes ..... J. W. Powell
Physiographic Features ..... J. W. Powell
Physiographic Regions of the U. S. J. W. Powell
Present and Extinct Lakes of Nevada ..... I. C. Russell
Beaches of the Atlantic Coast ..... N. S. Shaler
The Northern Appalachians ..... Bailey Willis
Niagara Falls and their History ... G. K. Gilbert
Mt. Shasta—A Typical Volcano .... J. S. Diller
Physical Geography of Southern New England ..... W. M. Davis
The Southern Appalachians ..... C. W. Hayes

AMERICAN BOOK COMPANY
NEW YORK CINCINNATI CHICAGO